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PLANTES NOUVELLES OU PEU CONNUES DE LA
RÉGION AMAZONIENNE (IX Série)

par

A. DUCKE

(Avec 2 Planches)

RHAMNACEAE

Ampelozizyphus Ducke n. gen.

Ad tribum *Zizyphaeae*. Flores hermaphroditi. Calix tubo breviter turbinato, lobis 5 intus uninerviis apice callosis, anthesi patentibus. Petala 5 ad marginem disci inserta, calicis lobis subaequilonga, longe unguiculata, apice cucullata. Stamina cum petalis inserta iisque inclusa filamentis filiformibus basi dilatatis, antheris dorsifixis bilocularibus rimis lateralibus dehiscentibus. Discus calicis tubum explens eoque arcte adnatus, supra planus integer orbicularis. Ovarium calicis tubo inclusum, cum eo et cum disco connatum, 3-loculare, ovulis e loculi basi erectis solitariis, stylo apice breviter trifido. Drupa supera basi toro crasso stipitata, stipitis basi a calicis lobis reflexis persistentibus circumdata, solum junior visa; exocarpium ut videtur carnosum, sat crassum; putamen durum at tenue, triloculare; semina 3 nitida exalbuminosa nondum bene evoluta. Frutex robustus alte scandens, inermis et ecirrhosus. Stipulae parvae setaceae caducissimae. Folia distiche alterna, 5-nervia nervis duobus exterioribus tenuibus interdum subobsoletis. Cymae axillares, in ramis annotinis saepius elongatis parte superiore aphyllis, racemos interruptos ad 300 mm. longos formantibus, saepe pluribus in paniculam amplam compositis.

Generi *Zizyphus* affinior, habitu autem valde dissimilis potius *Gouanieas* quasdam rememorans. A *Zizypho* praeter habitum diversum differt praesertim foliis integris quinquenerviis, ovario triloculari calicis tubo incluso et cum eo et cum disco plene connato, drupa toro stipitata, triseminata. Species unica Amazoniae partem centralem habitat.

Ampeloziphyphus amazonicus Ducke n. sp.

Ramuli striati, biennes angulosi et cortice rufo in laminulas soluto, glabri; annotini rufopubescentes. Folia petiolo 10-25 mm. longo valido supra anguste canaliculato solum in novellis puberulo, lamina in ramis biennibus vulgo 150-250 mm. rarius usque ad 300 mm. longa et 70-125 mm. rarius ad 165 mm. lata, in ramulis fertilibus vulgo multo minora saepius infra 100 mm. longa et infra 60 mm. lata, ovata vel oblongo-vel elliptico-ovata, basi rotundata vel obtusa, apice breviter acuminata (in minoribus saepe obtusa), basi et apice vulgo fortiter complicata, margine integerrimo, coriacea, subconcolore utrinque nitidula, cito glabra, costis 3 centralibus validis, externis duabus tenuibus in nervum marginalem arcuatum exeuntibus, venulis transversis utrinque tenuiter prominulis. Cymae vulgo semel rarius bis vel ter dichotome, rufopubescentes, vulgo 20-40 mm. longae pedunculo primario usque ad 20 mm. longo, secundariis brevibus, pedicellis anthesi circa 2-3 mm. longis. Flores virides, intus praeter calicis lobos tomentellos glabri; calix 2 mm. parum excedens, lobis quam tubus parum longioribus. Fructus immaturus usque ad 13 mm. longus, obovatus, siccitate irregulariter sub-tricostatus, glaber.

Habitat circa Manáos in silvis non inundatis, humidis, legit A. Ducke: prope Cachoeira do Mindú 17-12-1929 florif. et fruct. junioribus (H.J.B.R. n.º 25.654), et circa cataractas fluminis Tarumá, 24-12-1929 floribus junioribus et anthesi incipiente (H.J.B.R. n.º 25.653).

Ce nouveau genre de rhamnacées ressemble à première vue plutôt à la sous-famille *Gouanieae* qu'à celle des *Zizyphaeae* à qui il appartient par ses caractères essentiels. Les inflorescences et les fruits stipés rappellent certaines vitacées; les feuilles et les inflorescences, certaines menispermées. L'écorce intérieure dégage une odeur de salicylate de méthyle telle que l'on observe chez les *Pourouma* (moracées), chez certains *Polygala*, et chez la légumineuse *Parkia oppositifolia*.

ELAEOCARPACEAE

Sloanea corymbiflora DC. (= *latifolia* Schum.).

Arbre moyen de la forêt inondée près du Rio Macujubimzinho (région de Breves dans l'estuaire amazonien); fleurs blanches (H. J. B. R. n. 12.368). N'était connu que des Guyanes.

Sloanea dentata L.

Arbre de petite taille, fréquent sur les rives inondées du Macujubim dans l'estuaire amazonien; fleur (étamines) jaunâtre clair (H. J. B. R. n. 18.377). Espèce commune dans toute la région littorale de l'hyléa.

Sloanea amplifrons Johnston.

Arbre assez grand; fleurs avec étamines jaunes; la capsule échinée ressemble à celle du *S. dentata*. Forêt des hautes terres à

l'Est du lac Salgado (bas Trombetas, État du Pará), sur les rives pierreuses d'un ruisseau (Herb. Amaz. Mus. Pará n. 10.893).
Connu jusqu'ici seulement de la Guyane anglaise.

Sloanea Eichleri Schum.

Arbre moyen de la forêt non inondable. État du Pará: Bragança (H. J. B. R. n. 18.381); Peixeboi sur le chemin de fer entre Belem et Bragança (Herb. Amaz. Mus. Pará n. 8.787, leg. R. Siqueira). Bolivie: cours inférieur du Madre de Dios (H. J. B. R. n. 20.968, leg. J. G. Kuhlmann). Largement répandu depuis les Guyanes à travers la partie orientale du Pará jusqu'à Matto Grosso et à la partie Nord Est de Bolivie.

Sloanea Kappleriana Pulle.

Petit arbre de la forêt plutôt sèche, surtout aux environs de "campos"; fleurs blanchâtres, capsule rouge à l'intérieur. État du Pará: Mazagão (H. J. B. R. n. 20.983); Bragança (H. J. B. R. n. 20.973). État du Maranhão: colline de Pirocaua, 100 m. (Herb. Amaz. Mus. Pará n. 10.370). État d'Amazonas: Boa Vista, haut Rio Branco (H. J. B. R. n. 3.678, leg. J. G. Kuhlmann). Guyane hollandaise.

Sloanea guianensis (Aubl.) Benth.

Petit arbre de la forêt humide non ou rarement inondable; fleurs d'abord vertes, plus tard blanchâtres. Largement répandu dans l'Amazonie brésilienne, de Belem do Pará (H. J. B. R. n. 18.373 et 20.974) jusqu'à Esperança sur la bouche du Javary (H. J. B. R. n. 25.111).

Sloanea pseudo-dentata Ducke n. sp.

Inter species *S. dentata* L. et *S. robusta* Ultt. intermedia. Folia colore, consistentia et nervatione ut in *S. dentata*, at margine vix vel sat obsolete undulato nec dentato, pilositate brevi albida subtus in nervis et venulis bene conspicua;; flores quam in specie citata circa 1/3 minores, calice non cyathiformi sed jam in alabastro profunde 4-5 lobato, staminibus anthesi plena calicis longitudinem duplam excedentibus filamentis tenuibus filiformibus cillato-pilosis, antheris filamento brevioribus ovato-lanceolatis parum pilosis connectivo brevissime apiculatis. A *S. robusta* differt praesertim follis multo tenuioribus subtus pilosis, sepalis non usque ad basin solutis, brevioribus, vulgo minus numerosis.

Arbor parva vel mediocris ramulis modice crassis, pubescentibus, stipulis parvis lanceolatis tomentosis caducissimis, follis inferioribus saepe ultra 300 mm. longis elliptico-ovalibus, superioribus vulgo dimidio minoribus utrinque rotundatis, racemis brevibus, fasciculatis infra folia et cum ipsis, bracteis lanceolatis dense tomentosis subpersistentibus, floribus praefloratione aperta, anthesi ochroleucis, odoratis, tepalis plus minus acuminatis

herbaceis longe et non multum dense pilosis, capsula solum in fragmentis vetustis visa ut videtur 4-valvi extus setis longis sat rigidis dense vestita.

Habitat silva non inundabili in civitatis Pará partibus occidentalibus: Rio Branco de Obidos loco Cacaocalinho, 1-11-1919 florif., H. J. B. R. n.º 12.370; loco Pimental circa cataractas inferiores fluminis Tapajóz, 21-8-1923 florif., H. J. B. R. n.º 18.378. In civitate Amazonas circa Manãos loco Cachoeira Grande, 19-9-1929 floribus jam fecundatis et capsula vetusta, H. J. B. R. n.º 25.116. Specimina omnia legit A. Ducke.

Cette espèce croît dans les forêts non inondables de la moitié occidentale du bas Amazone et ses affluents, en amont, jusqu'au Rio Negro; elle y remplace l'espèce *S. dentata* des forêts inondées ou fréquemment inondables de l'estuaire amazonien.

Sloanea obidensis Ducke n. sp.

Speciei *S. sinemariensis* Aubl. mihi solum ex auctoris icone et diagnosi et e redescriptione a N. Y. Sandwith redacta notae affinissima et forsan hujus varietas, at foliis elliptico-obovatis basi cuneatis apicem versus distinctius undulatis et interdum serratis, junioribus subtus pilis minutis punctiformibus conspersis, tepalis oblongis acutis, staminum filamentis anthesi plena longis. Arbor parva vel mediocris floribus praefloratione aperta, anthesi albidis, capsulis uniseminatis.

Habitat in silvis non inundatis praesertim secundariis civitatis Pará parte occidentali: circa Obidos sat frequens, florif. 11-11-1919, H. J. B. R. n.º 12.369, fructif. 21-3-1924, H. J. B. R. n.º 20.967; circa Oriximiná fluminis Trombetas inferius, fructif. 23-2-1910, H. J. B. R. n.º 20.963; prope cataractas Mangabal medii fluminis Tapajóz florif. 7-9-1916, H. J. B. R. n.º 20.966. Specimina lecta ab A. Ducke, excepto n.º 20.967 a J. G. Kuhlmann lecto.

Cette espèce est certainement très voisine du *S. sinemariensis* et peut-être même une simple forme de ce dernier; elle correspond parfaitement à la redescription minutieuse du type par Sandwith, sauf certains détails des feuilles et des fleurs. Ces dernières sont très jeunes chez le type, mais déjà mûres chez nos échantillons, ce qui rend difficile leur étude comparative. Il faut en tout cas remarquer que *S. sinemariensis* a été collecté en Guyane française, mais notre espèce nouvelle exclusivement dans la partie occidentale de l'État du Pará, n'ayant pas encore été rencontrée dans la région littorale du Pará où la flore est semblable à celle de la partie correspondante des Guyanes.

Sloanea Kuhlmannii Ducke n. sp.

Ramuli sat crassi, pallido-lenticellosi, vetustiores cano-pubescentes novelli dense flavido-tomentosi, angulosi. Stipulae sat parvae lanceolatae dense tomentosae caducissimae. Folia alterna, apice ramulorum congesta; petiolus 15-35 mm. longus modice robustus subteres dense et persistenter tomentosus; lamina vulgo 90-170 mm. longa et 40-80 mm. lata (folia minora saepe adsunt nonnulla) elliptico-vel oblongo-ovata basi obtusa vel anguste subcordata saepe complicata, apice brevissime acuminata acumine saepe retusiusculo, margine praesertim in maioribus apicem versus repandae

undulato-subdentata, tenuiter coriacea, utrinque nitidula, subtus parum pallidior, utrinque in costis dense, in venulis sparsim submolliter pubescens pube supra demum praeter costas evanida, costis secundariis in utroque latere 10-13 subtus prominentibus saepe fere usque ad marginem distinctis, venulis reticulatis distinctis vel subobsoletis. Inflorescentiae axillares praesertim e ramuli partis foliatae basi, pedunculis 15-35 mm. longis vulgo deflexis apice in pedicellos tres 10-15 mm. longos trichotomis, pedunculis et pedicellis modice robustis dense tomentosis, bracteis caducissimis non visis. Tepala 4 anthesi plena 7-10 mm. longa basi 5-6 mm. lata, lanceolato-ovata acuminata, extus et marginibus etiam intus dense flavido-canotomentosa, intus praeter marginem parce griseotomentella; stamina numerosa tepalis 1/3 vel 1/4 breviora, filamentis dense albidopilosulis, exterioribus sat brevibus, interioribus antherae (sine connectivo) subaequilongis, antheris parum pilosulis oblongis longe appendiculatis; ovarium 4-loculare, pilis densis brevibus ferrugineis obtectum et pilis sat longis pallidioribus minus densis hirsutum, stilo glabro integro saepe contorto. Fructus ignotus.

Bóia Vista ad Río Branco, in civitate Amazonas, octobri 1913 leg. J. G. Kuhlmann, H. J. B. R. n.º 3.667.

Cette espèce a une certaine affinité avec *Sl. Garckeana* (Rio de Janeiro), mais ses feuilles sont plus amples, les fleurs un peu plus grandes, ayant les appendicules des anthères moins longues et beaucoup plus robustes et les poils hirsutés de l'ovaire moins longs et moins abondants. L'espèce amazonienne *S. grandis* n. sp. a une autre forme d'inflorescences, les fleurs plus petites, les anthères courtement apiculées.

Sloanea excelsa Ducke n. sp.

Arbor ut videtur 35-40 m. alta, trunco cylindrico basi radicibus tabularibus magnis fulto. Ramuli sat tenues, nodosi, juniores lenticellosi, etiam novelli glabri. Stipulae parvae lanceolatae plus minus tomentosae, caducissimae. Folia sparsa, alterna, glabra; petiolus 10-25 mm. longus gracilis basi et apice incrassatus, hic canaliculatus; lamina 40-80 mm. longa et 25-35 mm. lata, elliptico-vel oblongo-ovata vel elliptica, basi rotundata vel obtusa medio breviter in petiolum acutata, apice vulgo brevissime et latiuscule obtuse acuminata rarius obtusa, margine integro, saepe complicata, tenuius coriacea, utrinque (supra magis) nitida, subtus subferruginescens, costis secundariis utrinque 7-11 subtus tenuiter prominulis, venulis reticulatis subtus magis quam supra sub lente conspicuis. Inflorescentiae terminales et in axillis superioribus (foliis praesentibus vel delapsis), saepe paniculam densi-et multifloram usque ad 60 rarius 80 mm. altam formantes, griseo-puberulae, pedunculis et rhachidibus primariis subglabris; inflorescentiae partiales saepius plus minus racemiformes ramis saepe in dichasia bis trichotoma exeuntibus, pedunculis primariis vix usque ad 30 mm. longis gracilibus strictis, bracteis caducissimis non visis. Flores viridialbi; alabastrum (unicum visum) subdepresso globosum; tepala 4 subaequalia, antesi plena deflexa 3-5 mm. longa basi 2-2 1/2 mm. lata, oblongo-ovata obtusa vel acuta, membranacea, utrinque canotomentella marginibus densius pallidosericis; stamina numerosa tepalis 1/3 vel 1/4 breviora, filaments filiformibus pilosulis quam antherae longioribus, antheris ovatis vix apiculatis minime pilosulis; ovarium 4-loculare dense griseotomentellum stilo glabro apice brevissime quadrifido. Capsula usque ad 30 mm. longa et parum minus lata, breviter ovoidea vel subglobosa, 4 (rarissime 5) — valvis,

pericarpio crasse lignoso, extus dense et minute verruculoso-rugulosa et brevissime canotomentella, semine unico, arillo albo.

Habitat prope Manáos (civ. Amazonas) loco Estrada do Aleixo, 10-12-1932 florif., fructibus maturis aprili 1933, leg. A. Ducke, H. J. B. R. n.º 25.120.

Le seul individu que j'ai rencontré appartient aux très grands arbres de la forêt des environs de Manáos. L'espèce est caractérisée par la petitesse relative des feuilles, par les inflorescences multiflores mais ayant des pédoncules assez fins et des fleurs petites avec anthères ovoïdes non ou à peine apiculées, et par les fruits inermes.

Sloanea macrantha Ducke n. sp.

Arbor magna trunco basi radicibus tabularibus magnis fulto, cortice et ligno exteriore amygdalas amaras fortiter redolentibus. Ramuli crassi, striati et fortiter sulcati, juniores canotomentelli, parum lenticellosi. Stipulae caducae non visae. Folia sparsa, apice ramulorum densiora; petiolus 35-100 mm. longus canotomentellus, supra depressus et plurisulcatus; lamina 140-250 mm. longa et 80-150 mm. lata, ovata vel elliptica, basi saepius subcordata rarius rotundata vel obtusa, apice vulgo breviter acuminata vel apiculata, margine parum undulato, firme membranacea, supra obscure viridis sat nitida praeter costam tomentellam glabra, subtus ferruginescens subopaca squamulis microscopicis pallidis dense punctulata, costis secundariis utrinque 11-13 ante marginem areuato-anastomosantibus subtus prominentibus, venulis reticulatis supra et subtus tenuiter prominulis. Inflorescentia subterminalis usque ad 150 mm. alta, corymbiformis, pedunculis primariis 4-7, usque ad 80 mm. rarius 100 mm. longis strictis robustis compressis dense canotomentellis apicem versus latioribus, apice 3-5 tomis, pedunculis secundariis circa 10-20 mm. longis vulgo trichotomis in pedicellos 10-15 mm. longos densius canotomentosos post anthesin apice valde dilatatos; bractea caducae non visae. Flores albi (lactei), in alabastro ovati et acuminati; tepala 4 anthesi plena usque ad 22 mm. longa et ad 11 mm. lata, ovato-lanceolata apice acuminata, crassa, utrinque dense canotomentosa; stamina numerosissima tepalorum dimidio aequilonga, filamentis minimis (1/2 — 1 mm. longis) subglabris nigrescentibus, antheris linearibus breviter dense sericeopilosis, a connectivo glabro subulato 1 1/2 mm. longo superatis; stamina exteriora parva, ad staminodia reducta; ovarium quadrangulare, quadriloculare, dense cano-tomentellum, stilo tepalis aequilongo basi excepta glabro apice subintegro. Fructus ignotus.

Habitat in silva non inudabili prope Esperança (ad ostium flum. Javary, civ. Amazonas), 19-9-1931, H. J. B. R. n.º 25.112.

Cette espèce est remarquable par ses fleurs relativement grandes, entièrement blanches, réunies dans une ample corymbe pseudo-terminale. L'écorce intérieure et l'aubier répandent une forte odeur d'amandes amères.

Sloanea polyantha Ducke n. sp.

Arbor mediocris vel magna trunco crasso radicibus tabularibus fulto. Ramuli vix mediocriter crassi, juniores angulosi et lenticellosi, cinnamomei, novelli carotomentelli. Stipulae parvae lanceolatae, caducae vel subpersis-

tentes. Folia sparsa, alterna vel subopposita, glabra; petiolus 8-20 mm. longus, modice gracilis, basi et apice incrassatus, parum canaliculatus; lamina 50-150 mm. longa et 30-75 mm. lata, elliptico-vel oblongo-ovata rarius ovato-lanceolata, basi rotundata vel plus minus cordata rarius obtusa rarissime acuta saepe plicata, apice breviter vel longius acuminata, margine integro, tenuis vel crassius coriacea, supra nitida, subtus subopaca et saepe ferruginescens, costis in utroque latere 7-9 subtus prominentibus, venulis in utraque pagina dense reticulatis at non multo conspicuis. Inflorescentiae terminales et in axillis superioribus, in paniculam saepe subcorymbosam multi-et densifloram compositae, canotomentellae, pedunculis primariis vulgo numerosis 10-60 mm. longis modice robustis strictis bis vel ter trichotomis, pedunculis secundariis vulgo 5-15 mm., tertiariis (pedicellis) vix ultra 10 mm. longis; bracteae parvae subulato-lanceolatae caducissimae. Alabastra ovoidea tetragona, adulta breviter acuminata; tepala 4, alba, anthesi plena 10-15 mm. longa basi 4-5 mm. lata, oblongo-ovata, subcoriacea, extus densius intus parce sericea; stamina lutea numerosissima tepalis 1/3 vel 1/4 breviora, filamentis brevissimis, antheris linearibus parce et minime pilosulis apice acutis vel breviter apiculatis; ovarium 4-loculare dense canosericeum et tuberculis parvis dissitis munitum, stilo demum elongato apice glabro subintegro. Capsula ellipsoidea vel subglobosa diametro (sine aculeis) 20-25 mm., tomento brevi denso cano induta et aculeis sparsis ad 15 mm. longis sat rigidis microscopice setulosis acute acuminatis armata, pericarpio sublignoso (2-vel 4-valve?, capsula non plena matura), semine unico magno.

Habitat circa Manáos (Amazonas) in silva non inundabili locis paludosis secus rivum Mindú (H. J. B. R. n.º 25.118, florif., et 25.119, fructif.) et circa Estrada do Aleixo (H. J. B. R. n.º 25.117, floribus junioribus); specimina florifera novembre 1929, fructifera februario 1930 legit A. Ducke.

Cette espèce a beaucoup d'affinité avec *S. acutiflora* Uitt. (de la Guyane hollandaise), mais ce dernier a les feuilles membraneuses et les aiguillons de son fruit sont courts. *S. laxiflora* Spruce ex Bth. (du Cassiquiare) a les boutons obtus et ses feuilles sont beaucoup plus petites.

Sloanea grandis Ducke n. sp.

Arbor vulgo 30-40 m. alta trunco crasso basi radicibus tabularibus maximis fulto. Ramuli hornotini crassi, annotini mediocriter robusti, striati et fortiter sulcati, parte novella dense canotomentella et parum lenticellosa. Stipulae triangulares vel lanceolatae, canotomentosae, caducissimae. Folia alterna apice ramulorum congesta, petiolus 10-60 mm. longus modice robustus, parum depressus, striatus et sulcatus, sat dense canotomentellus tardius glabratus; lamina 80-270 mm. longa et 45-150 mm. lata, obovato-elliptica, basi vulgo anguste rotundata vel subcordata, apice late obtusa medio saepe brevissime apiculata vel rarius retusa, margine undulata et praesertim apicem versus saepe subserrata, membranacea vel demum subcoriacea, supra nitens praeter costam puberulam glabra, subtus pallidior opaca undique breviter in nervis densius submolliter canopuberula, costa centrali et costis secundariis subtus prominentibus in utroque latere 12-20 ante apicem distincte bifurcatis, nervo submarginali nullo, venulis reticulatis maioribus laxiusculis subtus prominulis, venulis minoribus supra dense reticulatis sub lente bene conspicuis. Inflorescentiae cum foliis in axillis superioribus, undique canotomentellae; pedunculi primarii 30-90 mm. longi

modice robusti stricti, apice 3-5-tomi; pendunculi secundarii 10-20 mm. longi vulgo trichotomi in pedicellos usque ad 15 mm. longos; bracteae ad articulationes et bracteola sub flore saepe subpersistentes, subulatae. Flores viriduli, in alabastro breviter ovoidel abrupte breviter acuminati; tepala 4, anthesi circa 5 mm. longa ovata acuta vel obtusiuscula utrinque canosericea; stamina numerosa filamentis $1/2 - 1\ 1/2$ mm. longis tenuibus dense pilosis, antheris 2- $2\ 1/2$ mm. longis subglabris ovatis connectivo in acumen breve tenue producto; ovarium 4-loculare ovoideo-conicum dense fulvidopilosum, stilo praeter basin glabro apice integro, demum sat elongato. Capsula vetusta 30-40 mm. longa quadrivalva, breviter ferrugineo-demum canotomentosa et setis 15-20 mm. longis substrictis brevissime spinuloso-pilosis, semine unico non bene conservato.

Habitat in silvis non inundatis civitate Pará, leg. A. Ducke; florif 7-1-1923 prope Bragança H. J. B. R. n.º 18.375; fructibus novissimis, sub radicibus collium Serra do Aramun (in regione Velha Pobre inter Almeirim et Prainha), H. J. B. R. n.º 20.964, et loco São Luiz ad cataractas infimas fluminis Tapajóz, H. J. B. R. n.º 20.969; fructibus vetustis, prope Bragança H. J. B. R. n.º 18.374, et prope Obidos, H. J. B. R. n.º 20.965.

Les feuilles, les fleurs et les fruits de notre nouvelle espèce rappellent dans leur aspect général les espèces *S. robusta*, *S. Eichleri*, *S. pseudo-dentata* et plusieurs autres, mais les inflorescences cymeuses longuement pédonculées et les fleurs à préfloraison close ne permettent aucune confusion avec les dernières. Notre espèce est encore remarquable par la taille souvent très grande des arbres, et par l'agglomération des feuilles sur la partie terminale des rameaux.

Sloanea erismoides Ducke n. sp.

Arbor parva vel mediocris ramulis modice robustis, junioribus parum angulosis interdum tenuibus, pallidolenticellosis, tenuissime canotomentellis, internodiis saepe longis. Stipulae parvae lanceolatae tomentellae caducae. Folia opposita, adulta (sola visa) glaberrima; petiolus vulgo 3-5 mm. rarius usque ad 10 mm. longus, praesertim apice valde crassus, striatus, sulcatus et rugosus; lamina vulgo 150-300 mm. longa, 50-100 mm. lata, ovato-vel obovato-vel lanceolato-oblonga, basin versus brevius vel longius cuneata, basi ipsa anguste complicato-subcordata vel fere subauriculata, apice breviter vel sat longe acuminata, margine integra vel vix obsoletissime undulata, subcoriaceo-herbacea vel (in fructiferis) tenuiter coriacea, utrinque nitida vix discolor, costis supra immersis subtus prominentibus, secundariis in utroque latere 10-13 ante marginem valde arcuatis et tenuiter conjunctis, venulis reticulatis maioribus laxis subtus prominentibus, minoribus densis utrinque solum sub lente bene conspicuis. Racemi terminales et in axillis superioribus, usque ad 80 mm. rarius 100 mm. longi, pauci-et dissitiflori, pedunculis (ad 30 mm. longis apice compressis et dilatatis) et rhachidibus gracilibus minime puberulis, bracteis parvis caducis, pedicellis gracilibus vulgo 15-25 mm. longis. Flores in speciminibus nostris recentissime deflorati tepalis et staminibus nonnullis conservatis; tepala 5-7 mm. longa basi $2\ 1/2 - 3$ mm. lata ovato-oblonga apice acuminata, herbacea, extus tenuiter intus sparsim canotomentella, marginibus densius tomentosis; stamina tepalis parum breviora, filamentis filliformibus dense albidopilosulis, antheris oblongis filamento subbreviori-

bus vel sublongioribus glabris vel subglabris modice longe apiculatis; ovarium ovoideum, 4-loculare, dense canotomentellum, plus minus rugosum, stilo glabro, compresso, tetragono et profunde 4-rimoso, apice in ramulos 4 sat longe recurvos diviso. Capsula 20-25 mm. longa, elliptico-obovata, breviter stipitata, 4-valvis, extus dense minute verruculoso-rugosa et tomento brevissimo induta, pericarpio lignoso sat crasso, matura tota (extus et intus) pulchre roseopurpurea, semine unico arillo coccineo.

Frequens in silva riparia paludosa secus rivum Ipanema prope Santarem (civ. Pará), leg. A. Ducke 6-9-1923 (recentissime deflorata) et 24-3-1926 (fructibus maturis), H. J. B. R. n.º 18.382.

Cette espèce nouvelle appartient évidemment à la parenté du *Sl. laurifolia* Bth. que je n'ai cependant pas vu. Ses amples feuilles très courtement pétiolées la distingueront toujours de ce dernier. A l'état stérile, notre arbre ressemble d'une façon étonnante à la vochysiacee *Erisma calcaratum* (Link) Warm., fréquente dans l'estuaire amazonien et dans quelques parties de l'état d'Amazonas; fructifère, il devient remarquable par ses capsules finement chagrinées, d'un beau rouge dans toutes leurs parties.

Sloanea verrucosa Ducke n. sp.

Arbor mediocris vel magna. Ramuli modice robusti, novelli angulosi et striati, dense cinnamomeo-tomentosi. Stipulae ovato-lanceolatae tomentosae caducae. Folia saepissime opposita apice ramulorum densiora; petiolus 15-25 mm. longus modice robustus supra appianatus et sulcatus, tomentosus, lamina 100-220 mm. longa et 60-105 mm. lata (adsunt saepe folia nonnulla multo minora), ovato-oblonga vel elliptica, basi obtusa vel anguste subcordata et saepissime complicata, apice breviter vel mediocriter abrupte acuminata, margine obsolete undulata, firme membranacea, utrinque nitida, supra pallide viridia praeter costam glabra, subtus subferruginescentia praesertim in nervis pilosula, costis omnibus et venulis maioribus supra distincte impressis subtus fortiter prominentibus, costis secundariis utrinque 7-10 ante marginem arcuto-conjunctis, venulis minoribus supra dense at obsolete reticulatis solum sub lente conspicuis. Inflorescentia subterminalis corymbiformis usque ad 180 mm. longa, tota cinnamomea-tomentosa, pedunculis primariis vulgo 3-5, robustissimis compressis et angulosis, 40-90 mm. longis, vulgo bis rarius ter 3-tomis vel 4-5-tomis, pedunculis secundariis et pedicellis robustissimis angulosis apice dilatatis, pedicellis vulgo 10-20 mm. longis, bracteis lanceolatis ad articulationes superiores subpersistentibus. Flores caryophyllum fortiter redolentes, in alabastro late ovoidel obtusi; tepala anthesi plena ad 20 mm. longa et ad 8 mm. lata oblongo-ovata acuta, crassa, utrinque dense canotomentosa, intus rosea; stamina numerosissima, lutea, tepalis circa 1/4 breviora, filamentis minimis (1/2 — 1 mm. longis) glabris, antheris linearibus dorso in medio adpresse albosericeo, apice subacutis vel minime apiculatis; ovarium quadrangulare, 4-loculare, dense cinnamomeopilosum stilo demum elongato superne glabro apice integro. Capsula adulta 25-30 mm. longa, 20-25 mm. lata, elliptico-obovata, dense brevissime canotomentosa et dense tuberculato-verrucosa, bivalvis, valvis crasse lignosis dorso carinatis; semen unicum arillo albo involtum.

Habitat circa Manãos (Amazonas) in silva non inundabili prope cataractam minorem fluminis Tarumá, leg. A. Ducke 14-2-1933 flor. et fruct. maturis, H. J. B. R. n.º 25.113. Arbor altera loco Estrada do Aleixo prope

Manáos florebat 19-12-1929, typo similis at partibus omnibus paululum minor et tepalis ochroleucis, evidenter ad hac speciem pertinet (H. J. B. R. n.º 25.114).

Cette espèce est surtout remarquable par sa capsule bivalve, densément couverte de petits tubercules. Les feuilles sont opposées; les nervures de la page supérieure sont distinctement enfoncées. Les inflorescences sont du type de celles du *S. macrantha* (dont les fruits sont inconnus); les fleurs comptent parmi les plus grandes du genre, elles répandent un parfum fort et très agréable qui rappelle l'oeillet.

Sloanea longipes Ducke n. sp.

Arbor mediocris vel saepius magna, trunco saepe compresso basi radicibus tabularibus magnis fulto, partibus vegetativis glabris. Ramuli modice validi, juniores sat graciles apice compressi, sulcati. Stipulae parvae lanceolatae vel subulatae, caducissimae. Folia alterna interdum subopposita, in ramulorum apice densiora, magnitudine valde inaequalia; petiolus in foliis maioribus vulgo 40-60 mm. rarius ad 80 mm. longus, sat tenuis, strictus, canaliculatus, basi et apice parum incrassatus; lamina in maioribus 150-200 mm. rarius ad 230 mm.) longa et 50-70 (rarius 85) mm. lata, oblonga vel lanceolato-vel rarius elliptico-oblonga, basi obtusa et plicata vel anguste rotundata, apice saepius longiuscule acuminata, margine integro vel vix minime undulato, herbaceo-subcoriacea, supra magis quam subtus nitida, supra glaucescens subtus ferruginescens, costis et venulis subtus vel rarius in utraque pagina tenuiter prominentibus, costis secundariis utrinque 9-13 ante apicem arcuatis et tenuiter conjunctis. Inflorescentiae subterminales et in axillis superioribus cum folio vel defoliatis, nonnunquam e ramulis brevibus pluribus in paniculam multifloram compositae, pedunculis primariis 200-700 mm. longis strictis sulcatis parum compressis semel vel bis 3-4-tomis, pedunculis secundariis usque ad 25 mm. tertiariis (ut adsint) vix ultra 15 mm. longis, omnibus minime tomentellis, primariis saepius glabris, bracteis cadusissimis non visis. Flores albi pistillo atropurpureo (in vivis); alabastra ovoidea acuta; tepala 4 subaequalia anthesi plena 6-8 mm. longa basi 2 1/2 — 3 mm. lata, ovata, breviter acuminata, herbacea, extus cinereo-puberula, intus subglabra marginibus dense canotomentosis; stamina numerosa, tepalis 1/3 — 1/4 breviora, undique plus minus conspicue albido-puberula, filamentis sat validis quam antherae parum brevioribus rarius sublongioribus, antheris oblongis, appendicula filiformi ciliata antherae subaequellonga; ovarium 4-loculare, in vivis atropurpureo. — In siccis dense fulvido-tomentosum, stilo integro glabro apice saepe incurvo. Fructus inermes videntur; adsunt novissimi, ut ovarium tomentosi at distincte rugosi.

Habitat ad ripas inundatas fluminis Macujubim in aestuario amazonico (civ. Pará), sat frequens, 9-7-1923, H. J. B. R. n.º 18.379; prope Manáos (Amazonas) loco Estrada do Aleixo in silvis paludosis secus rivulos frequens, 20-9-1929, H. J. B. R. n.º 20.982 (forma foliis magis coriaceis, floribus paululum minoribus, staminibus parcius puberulis). Specimina omnia legit A. Ducke.

Cette espèce peut être reconnue par la glabréité des parties végétatives, les feuilles souvent très longuement pétiolées, les an-

thères longuement appendiculées. La forme des inflorescences est celle de *S. Garkeana* Schum., de Rio de Janeiro. Le fruit adulte est inconnu; à l'âge très jeune, il est inerme, rugueux et revêtu de tomentum.

***Sloanea porphyrocarpa* Ducke n. sp.**

Arbor mediocris vel sat magna, ramulis modice robustis, junioribus fuscis, pallide lenticellosis, striatis et sulcatis, novellis parce canotomentellis. Stipulae parvae subulato-lanceolatae plus minus griseotomentosae, sat caducae. Folia alterna sparsa; petiolus vulgo 10-20 mm. longus subteres apice parum incrassatus, subglaber; lamina vulgo 60-150 mm. longa et 30-60 mm. lata, oblongo-obovata vel obovata, basi cuneata at basi extrema saepius angustissime rotundata nec sensim in petiolum attenuata, apice breviter acuminata, acuta, obtusa vel rotundata nonnunquam retusiuscula, margine subintegra vel apicem versus obsolete dentata, rigidius herbacea vel subcoriacea rarius tenuiter coriacea, utrinque glaberrima, subtus magis nitida et pallidior quam supra, costis secundariis in utroque latere vulgo 6-8 subtus prominentibus, ante marginem valde arcuatis et saepe conjunctis, venulis utrinque reticulatis, maioribus laxis sat conspicuis, minoribus densis solum sub lente bene conspicuis. Inflorescentiae terminales et saepe ad axillas superiores, in racemo simplici vel ramulis saepe trifloris, pauci-et dissitiflorae, interdum ad 80 mm. longae at vulgo breviores, canotomentellae, bracteis caducis non visis, pedicellis sat gracilibus usque ad 15 mm. longis apice saepe nutantibus. Flores viriduli, odorati, alabastris adultis depressosphaeroideis; tepala 4 subaequalia 5-6 mm. longa, basi 3 — 3 1/2 mm. lata, ovata apice acuta, siccitate nigra, minime cinereo-tomentella marginibus dense pallidotomentosa, anthesi recurvata; stamina numerosa tepalis circa 1/4 breviora undique sat dense pilosa filamentis brevibus, antheris oblongo-ovatis longe apiculatis; ovarium 4-loculare ovoideum, anthesi tomento rubido e pills microscopicis composito indutum stilo integro basi excepta glabro, post anthesin pills incrassatis densissimis minutissime verruculosum. Capsula 20-30 mm. longa breviter ovoidea vulgo 4-valvis pericarpio lignoso crasso, extus setulis purpureis brevibus minime cillatulis 1-2 mm. longis demum subdetergibilibus densissimis ornata, semine unico.

Habitat silva riparia periodice inundabili in civitate Pará, legit A. Ducke: prope Obidos loco Igarapé do Mamaurú (10-3-1915 florif. et fructibus maturis, Herb. Amaz. Mus. Pará n.º 15.719) et loco Cacaçal Imperial (8-1-1907 fructibus novissimis, H. A. M. P. n.º 8.102); ad flumen Cuminá-mirim fluminis Trombetas affluens (28-11-1910 florif. et capsulis vetustis, H. A. M. P. n.º 11.238). In civitate Amazonas silva paludosa secus flumen Antimary affl. fluminis Acre leg. J. Huber 1-4-1904 fructibus maturis (H. A. M. P. n.º 4.310).

Cette espèce habite la forêt de la "varzea" périodiquement inondable par la crue des fleuves. Ses caractères principaux sont: les feuilles alternes, obovées; les inflorescences racémiformes faiblement revêtues, mais les anthères fortement velues, celles-ci longuement apiculées; la capsule très densément couverte de soies assez facilement détergibles d'une belle couleur pourprée. Elle doit appartenir à la parenté du *S. quadrivalvis* Seem. (d'après la description dans "Flora Brasiliensis"), mais notre espèce nouvelle a les feuilles parfaitement alternes, et non pas decussato-opposées com-

me chez l'espèce mentionnée. Les fleurs (mais non les feuilles!) ressemblent à celles du *S. oppositifolia* Spruce ex. Bth. dont le fruit est inconnu.

***Sloanea bracteosa* Ducke n. sp.**

Arbor mediocris trunco basi radicibus tabularibus fulto. Ramuli modice robusti, nodosi, striati et sulcati, solum novelli canopuberuli. Stipulae lanceolato-ovatae tomentosae plus minus caducae. Folia alterna, apice ramulorum densiora; petiolus 10-30 mm. longus mediocriter robustus, sulcatus et striatus, solum in novellis tomentosus; lamina 60-150 mm. longa, 30-70 mm. lata, obovato-oblonga vel obovata, basi acuta et plicata, apice breviter acuminata, acuta vel (in minoribus) obtusa, margine vix minime undulata, tenuiter coriacea, utrinque viridis, subtus parum pallidior et minus nitida quam supra, adulta utrinque glabra, costis, omnibus et venulis maioribus (his laxe reticulatis) subtus prominentibus, costis secundariis utrinque 6-9, ante marginem arcuato-anastomosantibus. Inflorescentiae saepissime in ramulis brevibus hornotinis defoliatis subterminales, dense canotomentosae, pedunculis modice robustis strictis usque ad 9 fasciculatis, 20-50 mm. longis, bis trichotomis vel abortu saepissime dichotomis, pedunculis secundariis vulgo 15-30 mm., tertiariis (pedicellis) usque ad 20 mm. longis; bractee extus dense tomentosae intus subglabrae, ovato-lanceolatae, sat magnae (inferiores saepe ad 12 mm. longae, superiores dimidio minores), ad articulationes omnes (etiam in medio pedicelli) adsunt, sub anthesi persistentes. Flores in alabastro subglobosi; tepala 4, rosea, herbacea, anthesi ad 11 mm. longa et basi ad 9 mm. lata, ovata, obtusa, anthesi patentia apice recurvo, extus canotomentosa, intus dimidio apicali tomentella basin versus subglabra; stamina numerosissima tepalis parum breviora, lutea filamentis vix 1/2 mm. longo fusco, antheris lanceolato-linearibus appresse pilosis apice connectivo glabro lineari tenui 1/2 — 1 mm. longo apiculatis; staminodia nonnulla, anthera brevi sterili at connectivo longo, extus circa stamina adsunt; ovarium subglobosum, fulvidohirtum, 4-loculare, stilo parte superiore glabro apice integro. Capsula lignosa, 4-valvis, 30-40 mm. diametro, setis in valvarum dorso densissimis erectis strictis 30-40 mm. longis basi pilosis apice glabris acutis, usque ad maturitatem viridis, adulta 4-locularis; semina arillo involta, 1 per loculum (in capsula examinata semina duo bene evoluta, unum ut videtur abortivum, loculum quartum sterile).

Habitat circa Manáos (Amazonas) secus Estrada do Aleixo silva non inundabili, 9-12-1932 florif., 18-4-1933 fructif., leg. A. Ducke, H. J. B. R. n.º 25.115.

Cette espèce nouvelle est caractérisée par ses inflorescences, fasciculées autour du bouton terminal de rameaux défeuillés, munies de bractées persistantes; par ses fleurs roses, et par la capsule 4-loculaire avec une graine dans chaque locule.

QUIINACEAE

***Lacunaria grandifolia* Ducke n. sp.**

Speciei *L. grandiflora* Ducke similis, at statim recedit floribus octopetalis. Arborea parvae; folia lili speciei citatae aequaliter magna vel maiora, maxima usque ad 600 mm. longa et ad 140 mm. lata costis secunda-

riis usque 30 subtus in junioribus minime puberulis; stipulae ut in *L. Jenmani* (Oliv.) Ducke anguste subulatae. Inflorescentiae utriusque sexus subracemiformi-paniculatae cymulas saepius trifloras ferentes, tenuius quam in *L. grandiflora* tomentosae, bracteis subulatis subparvis. Flores feminei ut in *L. grandiflora* vel aliquanto maiores, sepalis duobus externis usque 9 mm., duobus internis et petalis (octo) 12-15 mm. longis, stigmatibus 10 ad 14. Flores masculi sepalis externis circa 6 mm., internis circa 8 mm., petalis usque ad 11 mm. longis 3-4 mm. latis; stamina (in floribus 3 examinatis) 115, 120 et 133. Fructus eo speciei *L. Jenmani* (Oliv.) Ducke similis, diametro circa 60 mm., pulpa eduli. "Moela de mutum" appellatur.

Habitat in silvis non inudatis Rio Negro superioris prope ostium fluminis Uaupés, 1-11-1932 leg. A. Ducke, H. J. B. R. n.º 23.776 (arbor feminea) et 23.777 (arbor mascula).

Ressemble surtout à l'espèce *L. grandiflora*, du moyen Tapajoz (Pará), dont cependant les fleurs (féminines) n'ont que 4 à 5 pétales et dont les fruits sont beaucoup plus grands. Les autres caractères différentiaux, référés dans la diagnose, n'ont certainement que de la valeur relative. Les fleurs mâles du *L. grandiflora* sont encore inconnues, mais se distingueront très probablement de celles de *L. grandifolia* par les pétales et les étamines beaucoup moins nombreuses. Les pétales beaucoup plus étroits, entièrement glabres, non striés, non résineux, et quelques caractères des feuilles distinguent notre espèce avec facilité du *L. pulchrinervis* n. sp.

Lacunaria pulchrinervis Ducke n. sp.

Arbor parva ramulis tenuiter rufotomentellis. Stipulae parvae subulatae acute acuminatae. Folia petiolo 40-60 mm. longo, lamina (in speciminibus nostris) 250-420 mm. longa et 90-150 mm. lata, lanceolato-elliptica vel oblongo-obovata, basi in petiolum longe attenuata vel obtusa, apice breviter acuminata, margine subintegra, coriacea, subconcolore, nitida costis subtus tenuiter rufo-puberulis opacis, his supra impressis subtus fortiter prominentibus, secundariis parallelis utrinque 33 ad 43. Inflorescentia mascula sola nota in speciminibus nostris usque 90 mm. longa racemiformis pauciflora verticillis 1 vel 2 dissitis, rufotomentosa; pedicelli usque ad 30 mm. longi rufotomentosi; sepala 4 circa 5-6 mm. longa coriacea extus tenuiter rufescenti-tomentosa; petala 8 alba anthesi valde reflexa ad 15 mm. longa 8-11 mm. lata, quam in reliquis speciebus multum latiora, glabra margine ciliata, distincte longitudinaliter nervosa, resina valde nitente induta; stamina (in floribus 3 examinatis) 105-110, alba.

São Paulo de Olivença (Rio Solimões, civit. Amazonas), in silva primaria loco alto, 7-10-1931 leg. A. Ducke, H. J. B. R. n.º 23.790.

Cette espèce nouvelle ressemble au *L. grandifolia* n. sp. mais s'en distingue aussitôt par ses pétales beaucoup plus larges et à marge ciliée, induits d'une substance résineuse brillante. Les côtes secondaires des feuilles sont en nombre plus grand que chez aucune autre espèce du genre, fort saillantes sur la page inférieure où elles se détachent par leur duvet brun rouge mat, sur le fond vert assez brillant.

SYNOPSIS DES ESPÈCES DU GENRE LACUNARIA

- A — Pétales au nombre de 8, rarement 7. Etamines très nombreuses, au moins 70.
- a — Côtes secondaires de la feuille peu nombreuses (5-15).
- I — Bractées relativement grandes, lancéolées. Sépales extérieurs plus courts que les sépales intérieurs et les pétales. Etamines 130-170. Styles 8-10. Fruit d'après Schwacke conico-ellipsoïde à sommet aplati, long de 70 mm. sur 50 mm. de large. Rio Novo (partie sud-est de l'État de Minas Geraes.)
L. decastyla (Radlk.) Ducke.
- II — Bractées très petites. Sépales extérieurs et intérieurs égaux en grandeur. Etamines 70-72. Styles 8. Fruit oval, long de 30-40 mm., large de 25-30 mm. De Belem à Bragança (rive méridionale de l'estuaire et littoral oriental du Pará).
L. pauciflora Ducke.
- b — Côtes secondaires de la feuille nombreuses (environ 20-40). Bractées petites, subulées. Sépales extérieurs plus courts que les intérieurs et les pétales.
- I — Page inférieure de la feuille densément revêtue de tomentum. Fleurs mâles assez petites. Etamines 77-85. Plante femelle inconnue. Cataractes du moyen Cuminá, affluent du Trombetas (partie nord de l'État du Pará).
L. Sampaioi Ducke
- II — Feuilles glabres, y peine les côtes en dessous plus ou moins pubescentes. Fleurs relativement grandes.
- 1 — Pétales de la fleur mâle longs jusqu'à 15 mm., larges jusqu'à 8-11 mm., induits d'une substance résineuse brillante, parcourus par des nervures longitudinales, ciliés aux marges. Etamines 105-110. Plante femelle inconnue. São Paulo de Olivença (Rio Solimões, partie ouest de l'État d'Amazonas).
L. pulchrinervis Ducke n. sp.
- 2 — Pétales non résineux, mats, glabres, dépourvus de nervures longitudinales; ceux de la fleur mâle longs jusqu'à 11 mm. sur 3-4 mm. de large; chez la fleur féminine, longs de 12-15 mm. Etamines 115-133. Styles 10-14. Fruit comme chez *L. Jenmani*. Bouche de l'Uaupés, haut Rio Negro (partie nord de l'État d'Amazonas).
L. grandifolia Ducke n. sp.
- B — Pétales 4 ou 5. Etamines beaucoup moins nombreuses. Feuilles glabres. Sépales extérieurs beaucoup plus petits que les intérieurs et les pétales. Styles 10-13.
- a — Côtes secondaires de la feuille 8-12.
- I — Stipules linéari-lancéolées obtuses ou aguës, foliacées, avec nerf médian distinct, longues de 20 à 30 mm. Fleurs chez les deux sexes également petites, sépales intérieurs et pétales avec seulement 3-4 mm. de longueur. Etamines 22-36. Fruit dépresso-sphéroïdal, long jusqu'à 30 mm., large jusqu'à 40 mm. Bas Amazone: Almeirim et Obidos (État du Pará); Parintins (État d'Amazonas).
L. minor Ducke

- II — Stipules linéari-subulées acuminées, longues de 5 à 15 mm. Fleurs féminines avec sépales intérieurs et pétales longs de 6 à 7 mm. Plante mâle et fruit inconnus. Rio Acre, Territoire de l'Acre.

L. acreana Ducke

- b — Côtes secondaires de la feuille 15-25. Stipules longues de 5 à 10 mm.

- I — Stipules subulées très aiguës. Fleurs féminines beaucoup plus grandes que les masculines, avec sépales intérieurs et pétales (non réfléchis) longs de 5 à 7 mm.; chez les fleurs mâles, ces parties ne mesurent que 3 mm. Étamines 21.34. Fruit plus ou moins globeux à sommet aplati, avec 50-70 mm. de diamètre. Du littoral oriental de l'État du Pará à la Guyane anglaise et de l'estuaire amazonien jusqu'à Iquitos, Pérou oriental.

L. Jenmani (Oliver) Ducke

- II — Stipules subulato-lancéolées, à sommet plus ou moins obtus. Fleurs féminines (les seules connues) avec sépales intérieurs et pétales longs de 8 à 12 mm., réfléchis à la fin de la floraison. Fruit ellipsoïde ou obovoïde presque globeux, long jusqu'à 120 mm., large jusqu'à 90 mm. Région des cataractes inférieures du Tapajoz (État du Pará).

L. grandiflora Ducke

MELASTOMATACEAE

Mouriria micradenia Ducke n. sp.

A specie affini *M. grandiflora* DC. differt foliis basi acutis, floribus omnibus e trunci nodis, antherarum connectivi glandula obsoleta vel minima. Arbor parva ramis divaricatis, vetustioribus teretibus, junioribus acute quadrangulis valde compressis, novellis subalato-marginatis, praeter flores glabra. Folia brevissima petiolata, lamina 90-140 mm. longa et 45-70 mm. lata lanceolato-oblonga basi valde acuta apice plus minus longe subsensim acuminata, colore, consistentia, nervatione etc. ut in specie citata. Flores omnes e trunci nodis in fasciculis multifloris densis; pedicelli simplices uniflori vix ad 5 mm. longi super basin articulati et fugaciter bibracteolati, minime furfuracei, in vivo virides; calix magnitudine forma etc. ut in specie citata, in vivo extus cyaneus intus albus; petala in vivo alba, vulgo distincte dentata, caeterum ut in specie citata; stamina ut in specie citata at connectivo vix gibboso glandula dorsali minima vel obsoleta, filamentis in vivo, albis, antheris pallide aurantiacis. Fructus edulis dicitur, mihi ignotus.

Habitat prope São Paulo de Olivença (Rio Solimões, in civitate Amazonas), silva loco alto, 23-10-1931 legit A. Ducke, H. J. B. R. n.º 25.520.

Petit arbre du sous-bois; une des 3 espèces strictement cauliflores que j'ai rencontrées en Amazonie (*M. trunciflora* Ducke, *M. cauliflora* Mart., *M. micradenia* n. sp.). *M. grandiflora* DC., espèce largement répandue dans l'Amazonie, ressemble à notre nouvelle espèce plutôt dans les échantillons d'herbier qu'en nature; ses fleurs naissent sur les rameaux; elle habite le sous-bois de la forêt périodiquement inondable, ou, rarement, des endroits humides dans la forêt des hautes terres.

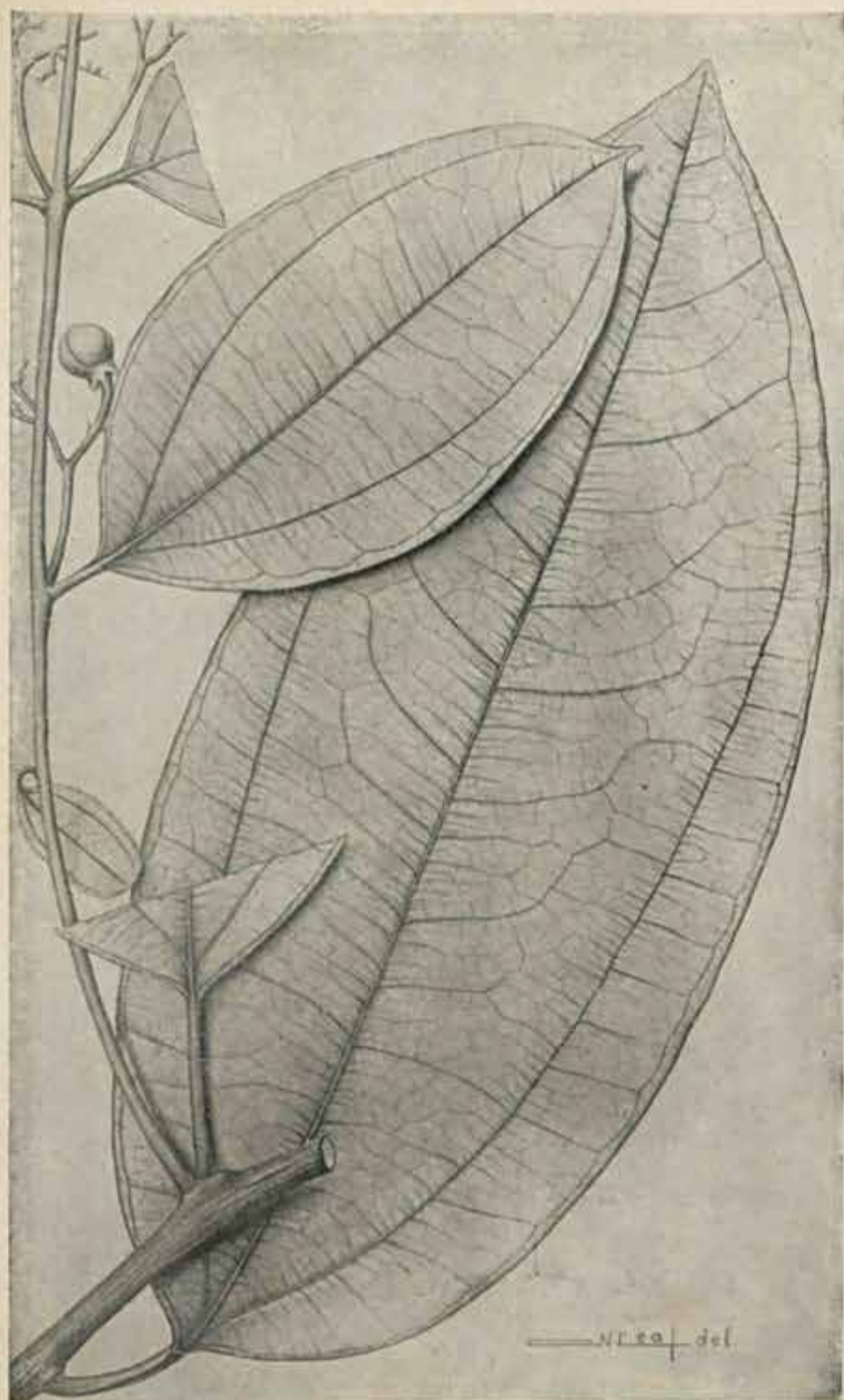
RUBIACEAE

Basanacantha altiscandens Ducke n. sp.

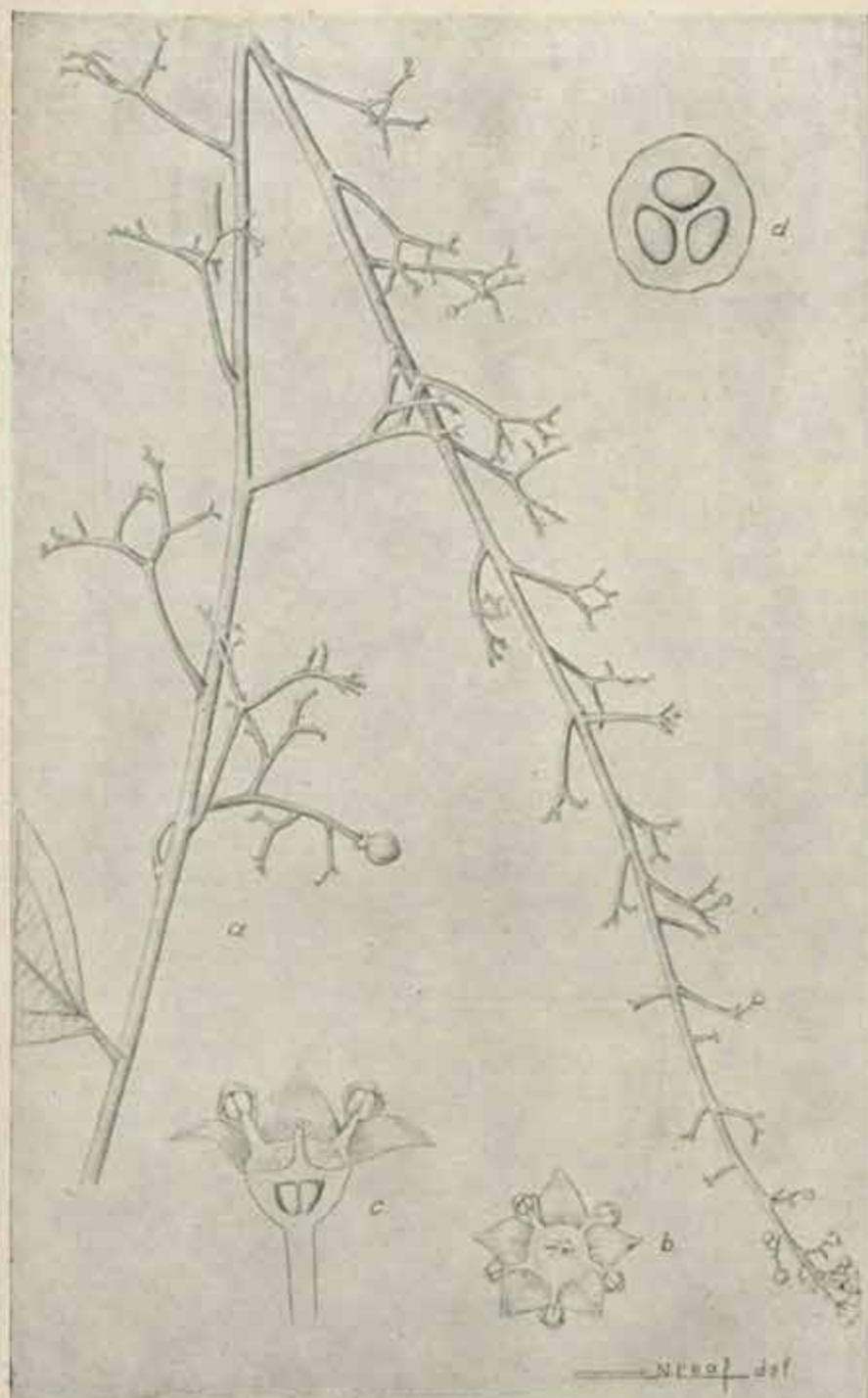
Frutex robustus alte scandens, ramis glabris validis solidis, subteretibus vel leviter tetragonis, interdum decortinantibus cortice cinnamomeo saepe in laminulas soluto, ramulis minoribus oppositis apice foliiferis saepe paulo rarius multo infra apicem spina uncinato-deflexa saepius ad 10 mm. rarius ad 18 mm. longa vulgo validissima et acutissima armatis. Stipulae vix ultra 10 mm. longae triangulares acuminatae, glabrae, intus basi pilis appressis pallidis post delapsam stipulam in cicatrice aliquantum persistentibus instructae. Folia siccitate fusciscentia, in eodem ramulo magnitudine valde inaequalia; petiolus vulgo ad 18 mm. rarius usque 25 mm. longus supra applanatus; lamina in mediis circa 100-120 mm. longa et 60-70 mm. lata, in maioribus usque ad 150 mm. longa et ad 85 m. lata, elliptico-vel late oblongo-ovata, basi vulgo sat breviter cuneato-attenuata, apice rotundata et apiculata vel medio acuta et breviter abrupte cuspidato-acuminata, saepe mucronulata, adulta tenuiter coriacea supra nitida subtus opaca, glabra, utrinque in venulis microscopice granulosa (non aspera), costis lateralibus in utroque latere 6-8 arcuato-ascendentibus, venulis transversis sat dense reticulatis praesertim supra fortiter prominentibus. Flores solum masculi noti, siccitate nigrescentes, corolla in vivo alba, odorati, apice ramulorum in cymas 1-3 sessiles vel brevissime pedunculatas, 3-7-floras, dispositi; pedicelli glabri 18-25 mm. longi; calix usque ad basin in lobos 5 anguste subulatos 5-8 mm. longos fissus, glaber, loborum marginibus pellucidis apicem versus minime subglanduloso-ciliatis; corolla glabra, tubo 25-32 mm. longo siccitate 3-4 mm. lato apice sub lobis plus minus ampliato, intus sparsim subglanduloso-piloso, lobis 10-15 mm. longis plus minus ellipticis anthesi radiatim patentibus; antherae lineares glabrae tubi parti superiori insertae et inclusae; discus annularis glaber basi pilosus; stilus tubo brevior, glaber, apice clavatus.

Habitat prope Esperança ad ostium fluminis Javary (in civitate Amazonas), silva non inundabili, 19-9-1931 leg. A. Ducke, H. J. B. R. n.º 24415.

Cette espèce nouvelle a évidemment de l'affinité avec *B. asperifolia* Sandwith, de la Guyane anglaise. Elle est, comme celle-ci, une grande liane, et la disposition des rameaux, les épines de ceux-ci, la forme des feuilles et celle du calice sont presque à peu près les mêmes; ses formes sont cependant plus robustes, les rameaux ne sont pas fistuleux, les feuilles ont les veines transversales fortement réticulées, les fleurs sont plus grandes, et, enfin, la plante est entièrement glabre excepté les quelques parties très restreintes indiquées dans la diagnose.



Ampelozizyphus amazonicus. Rameau fertile, partie inférieure (1/1)
(N. Leal del.)



Amp. amazonicus: a — rameau fertile, partie supérieure (1/1); b — fleur (4/1); c — fleur, coupe longitudinale (8/1); d — drupe, coupe transversale (3/1) (N. Leal del.)

NOVOS CERAMBYCIDEOS DO BRASIL, DA ARGENTINA
E DE COSTA RICA

por

JULIUS MELZER

Sub-familia CERAMBYCINAE

(Publicação posthuma (*))

Eurymerus decoratus, n. sp.

Elongatus, depressus, nitidus, ferrugineo-rufus, setis pallidis in elytris lineatim ordinatis hirtus, antennis tibilis tasisque testaceis vel rufo-testaceis, femoribus basi rufo-testaceis, apice infuscatis, elytris utrinque plagis duabus, maximis, flavo-testaceis, costulis duabus eburneis decurrentibus, ornatis; caput inter antennas leniter concavum, punctis minutis sat dense cribratum, fronte brevi, passim punctata, longitudinaliter sulcata, genis brevissimis, oculis magnis, grosse granulatis, valde incis, lobis superioribus inter se distantibus, lobis inferioribus semiglobosis; antennae ♂ corpore plus sesqui, ♀ sexta parte longiores, subtus cillatae, haud sulcatae, scapo brevi, obconico, subtiliter punctato-scabroso; thorax elongatus, ovalis, supra deplanatus, punctis rotundis, inordinatim ordinatis, sat dense impressus, vitta elongata in medio, utrinque callo subbasali, curvato, glabris, ♂ lateribus et subtus plaga, grosse punctata, munitis, prosterno antice transversim striolato; scutellum transversum, apice retundatum, argenteo-sericeo tomentosum; elytra elongata, deplanata, basi recte truncata, postice sensim leniter attenuata, apice singulatim obliquiter truncata, angulis suturalibus rotundatis, externis dentato-productis, punctis mediocribus dense irregulariterque cribrata, punctis posticis vix obsoletioribus; femora compressa, clavata et pedunculata, antica supra arcuata; tibiae extus leniter carinatae; tarsi postici elongati, art. 1º, 2º et 3º simul sumptis longiore; prosterni processus angustus, postice arcuatus; mesosterni processus latissimus, planus; me-

(*) — JULIUS MELZER, considerado o maior especialista em Cerambycideos na America do Sul, falleceu a 20 de Dezembro de 1934, na cidade de S. Paulo.

Sua rica colleção de coleopteros, contando 26.000 exemplares de varias familias, com grande numero de typos, foi adquirida pelo Instituto de Biologia Vegetal, integrando hoje a colleção de sua Secção de Entomologia Agricola. Assim no presente trabalho sempre que houver referencias a colleção do Autor, fica comprehendido tratar-se da colleção do Instituto de Biologia Vegetal.

tasternum lateraliter cinereo-sericeo tomentosum, subtilissime punctulato-coriaceum; abdomen punctis paucis setigeris passim cribratum.

Long. 12,5 — 16,5 mm. 7 ex.

Hab. Estado de São Paulo: Cidade, colleccionado pelo autor, Villa Cerqueira Cesar, R. Muus leg., Ypiranga, São Bernardo, R. Spitz leg. Typo na collecção do autor.

Durch die Zeichnung der Decken und die Form ihrer Spitzen leicht von den bekannten Arten zu unterscheiden.

Coleoxestia ebenina, n. sp.

Elongata, atra, nitida, supra setis brevissimis, flavescence-cinereis passim hirta, pectoris lateribus scutelloque flavescence-sericeo tomentosus; caput exsertum, fronte punctato-scabrosa, vertice sat grosse punctato, inter oculos longitudinaliter carinato, tuberibus antenniferis intus vix productis, oculis magnis, lobis inferioribus semiglobosis, genis brevibus, acutis; antennae ♂ apicem elytrorum superantes, 11-articulatae, subtus basi laxe ciliatae, scapo obconico, subnudo, dense punctato-scabroso, art. 2 — 11 dense flavescence tomentosus, art. 3 intus brevissime angulato-dentato, 4 — 10 serratis, art. ultimo appendiculato, art. 3 apice, 4 — 6 intus lateraliter sulcatis, art. 4 — 5 subaequalibus; thorax latitudine brevior, antice posticeque coarctatus et sulcatus, lateribus subrectis, foveis grossis et profundis, plus minus transversim ordinatis, confertim variolosus, linea dorsali, ad basim longitudinaliter sulcata, laeve, setis brevissimis flavescence-cinereis vel flavescencebus passim hirtus; scutellum subtriangulare, flavescence-sericeo tomentosum; elytra elongata, apicem versus sensim leniter angustata, apice quadrispinosa, spinis subaequalibus, subtilissime vermiculata et passim punctata, punctis setigeris, setis brevissimis, flavescence-cinereis; femora modice clavata, supra apicem versus dense punctato-coriacea et flavescence tomentosa lateraliter punctis maioribus passim cribrata, subtus dense flavescence hirta, media et postica apice subinermia; tibiae dense sat grosse scabroso-punctatae; prosterni processus intercoxalis postice paululum dilatatus, abrupte declivis; mesosterni processus planus, antice leniter excavatus; metasternum abdomenque punctis paucis setigeris passim cribrata.

Long. 25 — 30 mm. 4 ex.

Hab. Estado de Matto Grosso: Murtinho, Fazenda Varzea Alegre, R. Spitz e W. Melzer leg. Typo na collecção do autor.

Eine *C. atrata* Gounelle und *C. nigropicea* Bates nahestehende Art, die sich von beiden leicht durch die Sculptur des Thorax und das behaare Schildchen unterscheiden laesst.

Piezocera Araujo-Silvai, n. sp.

Parva, subgracilis, ferrugineo-rufa, elytris pallidioribus, undique pilis elongatis et erectis passim hirta, capite, thorace mesosternoque opacis, elytris, antennis, metasterno, abdomine pedibusque nitidis; caput inter antennis leniter concavum, tuberibus antenniferis haud roductis, vertice tuberibus minutissimis, setigeris passim instructo, fronte transversa, haud longitudinaliter sulcato, utrinque lateraliter punctis paucis, mediocribus

passim cribata, oculis grosse granulatis, valde incis, lobis superioribus inter se late separatis, lobis inferioribus semiglobosis, genis brevissimis; antennae dimidium elytrorum vix superantes, undique praesertim subtus pallido pilosae, scapo brevi, opaco, subcylindrico, subtus leniter arcuato, punctato-scabroso, art. 3 — 10 triangularibus et serratis, subaequalibus 11 modice elongato, apice acuminato, 3 — 11 sulcatis, bicarinatis, nitidis; thorax latitudine duplo longior, basi valde coarctatus et transversim sulcatus, supra leniter inaequalis, margine antica arcuatim elevata, capitis basim eminente, lateraliter tuberculo minuto, acuto, ante medium armatus, dorso lateraliterque tuberculis minutissimis, setigeris, irregulariter ordinatis, passim instructus; scutellum minutum, quadratum, apice rotundatum; elytra basi thorace latiora, parallela, paulo ante apicem gradatim angustata, apice ipso sinuato-truncato in singulis, angulis externis valde dentatis, suturalibus breviter productis, subdepressa, utrinque juxta suturam sulco lato, ad quartam partem posteriorem terminato impressa, punctis mediocriter, sublineatim ordinatis, profunde cribata; pedes breves, subaequales, femoribus pedunculatis et clavatis, tibiis compressis, gradatim valde dilatatis, sulcatis et bicarinatis, tarsis brevibus; prosterni processus angustus postice dilatatus; mesosterni processus duplo latior, planus.

Long. 6,25 mm. 1 ex.

Hab. Districto Federal: Guaratiba, Aristides G. d'Araujo e Silva leg.

Diese Art steht *P. serraticollis* Linell nahe, unterscheidet sich leicht von ihr durch das mit feinen Tuberkeln versehene Pronotum und die anders geformte Spitze der Decken.

Gnomidolon addictum, n. sp.

Gracile, angustum, piceum vel rufo-piceum, nitidum, setis pallidis in elytris lineatim ordinatis sparsim hirtum, antennis, — art. 1-2 rubropiceis exceptis, — pedibus, coxis anticis et intermedialis, elytrorum utrinque macula humerali, saepius indistincta, linea plus minus elongata dorsali, paulo ante medium, pone medium fascia obliqua, ad saturam et ad marginem ascendente apiceque laete rufo-testaceis; caput vix punctulatum, rufopiceum, fronte pallidior, tuberculis antenniferis paulo productis; antennae basi subtus laxe ellipticae, scapo gracili, arcuato, art. 3-5 obtusissime sulcatis; thorax latitudine plus duplo longior, arcuatus, subcylindricus, basi et paulo ante apicem coarctatus et sulcatus, supra vix inaequalis, punctis paucis, setigeris passim cribatus; scutellum minutum argenteo-sericeum; elytra a basi ultra medium mediocriter lineatim punctata, postice laevia, disco propter suturam longitudinaliter utrinque depressa, apice singulatim truncata, angulis externis valde spinosis, suturalibus vix productis; femora elongata, sublinearia, medio vix incrassata, intermedia breviter bidentata, postica extus longe, intus breviter spinosa; mesosternum omnino, metasternum lateraliter, postice plagiatim dilatata, pube albida subtiliter vestita.

Long. 5 1/2 — 7 mm. 4 ex.

Hab. Estado de São Paulo: Capital, parque do Estado, colleccionado pelo Autor, Villa Cerqueira Cesar, R. Muus leg.; Estado de Santa Catharina: Mafra, A. Maller leg. Typo de S. Paulo na colleção do autor, co-tipo na colleção do Snr. Maller.

Diese Art ist durch die Faerbung und die Zeichnung der Decken leicht zu erkennen. Bei einem der Exemplare ist der vor der Mitte stehende, linienartige Dorsalfleck der Decken nach dem Seitenrande zu verschwommen erweitert und mit dem am Seitenrande sich befindenden, nach vorn vorgezogenem Aste der Querbinde, die hier gleichfalls erweitert ist, zusammenfließend.

Octoplon antennatum Thoms. var. **rubricolle**, n. var.

Elongatum, nitidum, laete rufo-rubrum, capite, antennis, elytrorum tertia parte apicali, abdomine, segmenti 1 margine antica saepius excepta, clava femorum, tibiis tarsisque atris, elytris utrinque linea elongata dorsali, suturae parallela, ante medium, ad tertiam partem posteriorem fascia obliqua ad suturam ascendente, marginem haud attingente, testaceo-albis; caput passim punctatum, punctis desioribus in vertice, tuberibus antenniferis paulo productis; antennae scapo excepto, dense cinereo villosae, subtus laxae ciliatae, scapo clavato, arcuato, basi supra longitudinaliter obsolete sulcato, art. 3 o valde inflato, longitudinaliter carinato, 4 simplici, carinato, praecedente dimidio brevior, art. 3-4 simplicibus, 3-8 carinatis; thorax latitudine sesquilingior, basi et paulo ante apicem leniter coarctatus et transversim sulcatus, vix arcuatus, supra quadrituberculatus et vittis duabus argenteo-sericeis, saepius plus minus indistinctis, antice abbreviatis longitudinaliter ornatus, subtus etiam ante coxas subtilissime argenteo-bivittatus, punctis paucis setigeris passim cribratus; scutellum argenteo-sericeum; elytra punctis paucis asperatis, setigeris, lineatim impressa, disco propter suturam longitudinaliter utrinque depressa, ad marginem exteriorem depressionis costula ab humeris fere ad quartam partem posteriorem decurrente munita, paulo ante apicem sensim attenuata, apice obliquiter singulatim emarginata, angulis externis valde spinosis, suturalibus dentatis; femora gradatim incrassata, antica et intermedia clavata, intermedia bidentata, dente interno majore, postica breviter bispinosa, spinis aequalibus, tibiae extus carinatae; corpus subtus subtiliter cinereo tomentosum.

Long. 7 — 11 mm. 10 ex.

Hab. Rio Grande do Sul: Porto Alegre, P. P. Buck leg. Typo na collecção do autor, cotypo na collecção do Snr. Buck.

Alle Exemplare sind in der Zeichnung uebereinstimmend, doch ist die rote Grundfarbe bei einigen etwas heller. Trotz der Abweichung in der Faerbung, des Fehlens des Apicalflecks der Decken (bereits bei der aberranten Form: *graphicum* Thoms. constatiert), duerfte *rubricolle* nur als Varietaet zu *antennatum* gehoeren und vielleicht eine lokale Rasse bilden.

Der helle Laengsfleck vor der Mitte der Decken befindet sich auf der am Aussenrande der Vertiefung gelegenen Rippe, die helle Querbinde begrenzt nach der Basis zu die schwarze Flaechen des hinteren Drittels.

Syaax fuscolineatus, n. sp.

Angustus, elongatus, laete rufo-testaceus, antennarum art. 3 — 11, elytris pedibusque pallidioribus, elytris utrinque linea longitudinali, ab

humero ad sextam partem posteriorem continuata, fusca ornatis; caput supra opacum, subtus nitidum, inter antennis transversim elevatum et profunde sulcatum, tuberibus antenniferis paulo productis, fronte transversa, plana, longitudinaliter subtilissime sulcata, palpis maxillaribus labialibus plus duplo longioribus, genis brevibus, oculis sat profunde incisiss, magnis, grosse granulatis, lobis superioribus distantibus, lobis inferioribus semiglobosis; antennae ♀ corpore quarta parte longiores, subtus laxè ciliatae, art. 1 — 2 opacis, 3 — 11 nitidis, scapo clavato, arcuato, supra basi haud sulcato, art. 3 — 11 simplicibus, nec carinatis, nec sulcatis; thorax latitudine plus duplo longior, haud arcuatus, sub-cylindricus, basi et paulo ante apicem transversim leniter sulcatus, opacus, subtus apicem versus nitidus ibique transversim plicatus, subtilissime punctulato-coriaceus et rufo testaceo tomentosus; scutellum triangulare, apice late rotundatum, subtilissime cinereo tomentosum; elytra setis erectis lineatim ordinatis hirta, nitida, elongata, postice perparum et gradatim attenuata, apice singulatim oblongo-acuminata, punctis minutis sat dense irregulariterque cribata; pedes mediocres, coxis anticis et intermediis contiguis, illis conicis, extus angulatis, femoribus compressis, pedunculatis et clavatis, tibiis linearibus, haud carinatis, tarsis posticis subelongatis, art. 1^o e 2^o et 3^o simul sumptis longiore; prosterni processus acute triangularis, inter coxas parum penetrans; mesosterni processus acute triangularis, inter coxas haud penetrans; metasternum nitidum, subtilissime rufo-testaceo tomentosum, punctulato-coriaceum, punctis paucis, setigeris passim intermixtis; abdomen nitidum, molle, subtilissime passim rufo-testaceo tomentosum, segmento ultimo elongato, triangulari, apice rotundato.

Long. 10 — 13 mm. 3 ♀.

Hab. Estado do Rio de Janeiro: Itatiaya, 700 m. J. F. Zikan leg.; Estado de Minas Geraes: Viçosa, E. J. Hambleton leg. Typo na collecção do autor.

Von der einzigen bekannten Art, *S. stramineus* Lacord, wurde bislang nur das ♂ beschrieben. Gounelle, der sie aus Jatahy, Goyaz meldet, erwähnt nichts ueber die Unterschiede der beiden Geschlechter. Lacordaire's Art liegt mir in einem ♂ aus Már de Hespanha, Minas Geraes und einem weiteren aus Jatahy, Goyaz vor.

Die von *S. fuscolineatus* stimmen mit der Beschreibung, die Lacordaire von dem Genus giebt, sowie mit dem ♂ von *stramineus* bis auf die Form und Laenge der Antennen gut ueberein, sodass meine Annahme, dass es sich bei den vorliegenden Exemplaren um dieses Genus handelt, berechtigt erscheint.

Bei einem der Exemplare endet die dunkle Linie der Decken nicht in gerader Linie vor der Spitze, sondern biegt hier in einem Bogen bis zur Naht ab.

Compsa dilaticornis, n. sp.

Elongata, nitida, castaneo-rufa, setis pallidis in elytris lineatim ordinatis hirta, antennis apicem versus pallidioribus, elytris utrinque linea elongata, eburnea, dorsali, saturae parallela, ad quartam partem anteriorem incipiente, pone medium termiata ornatis; caput punctis paucis passim

cribatum, tuberibus antenniferis productis, acutis, subtus transversim plicatum; antennae ♂ corpore sesqui, ♀ vix longiores, subtus basi sat dense ciliatae, scapo clavato, arcuato, basi longitudinaliter obtuse sulcato, art. 3 — 5 fortiter, 6 modice incrassatis, 3 — 6 carinatis, art. 4 sequente dimidio brevior; thorax cylindricus, arcuatus, latitudine duplo longior, basi leniter transversim sulcatus, punctis paucis setigeris passim cribratus, prosterno laeve, ante coxas utrinque vitta elongata, marginem anticam haud attingente, argenteo-sericea, antice subtilissime transversim plicato; scutellum minutum, subtriangulare, dense cinereo-sericeo tomentosum; elytra elongata, ad suturam paulo depressa, subparallela, paulo ante apicem sensim attenuata, apice bilunata, angulis externis mediocriter, suturalibus breviter dentatis, punctis minutis, sublineatim ordinatis, profunde cribrata, postice laevia; femora valde clavata, apice inermia; tibiae posticae extus haud carinatae; corpus subtus nitidissimum, vix tomentosum.

Long. 8 — 10 mm. 2 ex.

Hab. Rep. Costa Rica: Hamburg Farm, Reventazon, Ebene Limon, Ferd. Nevermann leg. Typo na collecção do Snr. Nevermann, cotypo na collecção do autor.

Diese Art erinnert in der Zeichnung der Decken an *Ibidion lineolatum* Bates. Sie unterscheidet sich, abgesehen von den generischen Merkmalen durch die dunklere, gleichmaessige Grunfarbe und die in der Form stark abweichenden 3 — 6 — Glieder der Antennen. Von den bekannten Arten des Genus *Compsa* ist sie durch die elfenbeinfarbige, etwas erhabene Linie der Decken leicht kenntlich.

***Compsa multiguttata*, n. sp.**

Angusta, elongata, nitida, rufo-picea, antennis pedibusque pallidioribus, in elytris setis flavis lineatim ordinatis hirta, in singulo elytro maculis 7 margineque rufo-testaceis, 4 in medio, in quadrato ordinatis, quarum 2 maioribus, dorsalibus, leniter elongatis, 1 juxta suturam, sub-rotundata, 1 marginali, plus minus indistincta, 5 dorsali, paulo pone medium, 6 dorsali, leniter elongata, postice extus leniter angulata et dilatata, 7 apicali; caput punctulatum, subtilissime argenteo pubescens, tuberibus antenniferis haud productis, genis fere nullis, vertice longitudinaliter carinato; antennae corpore longiores, basi ciliatae, scapo obconico, arcuato, basi haud excavato, art. 3 — 8 carinatis, art. 3 — 5 vix vel non incrassatis, art. 4 praecedente leniter brevior; thorax cylindricus, arcuatus, latitudine duplo longior, basi et ante apicem leniter transversim sulcatus, dorso obtusissime argenteo pubescens, setis paucis, longissimis et erectis passim hirtus, haud punctatus; elytra elongata, subparallela, paulo ante apicem sensim attenuata, apice singulatim obliquiter emarginata, angulis externis longe suturalibus breviter spinosis, dorso paululum deplanata, infra scutellum ad suturam et in medio a basi ad medium utrinque depressa; femora clavata, media et postica subinermia; tibiae posticae haud carinatae; sterna abdomen que lateraliter pube argentea subtilissime vestita.

Long. 9,5 mm. 1 ♀.

Hab. Rep. Argentina: Prov. Tucuman, C. Bruch leg. Typo na collecção do Snr. Bruch.

Durch die Färbung und die Makeln der Decken leicht von den bekannten Arten zu unterscheiden.

***Compsa lineatoguttata*, n. sp.**

Elongata, angustissima, nitida, picea, antennis, pedibus, mesosterno abdomineque rufo-testaceis, in elytris setis flavis, erectis, sat longis lineatim ordinatis hirta, in singulo elytro margine suturaque anguste rufo-testaceis et maculis 6, lineatim ordinatis, testaceis ornatis, 1 — 3 leniter elongatis, aequilongis, 1^a. humerali, 2^a. dorsali, ante medium, 3^a. in medio, dorsali, 4^a. dorsali, subrotundata, pone medium, 5^a. leniter elongata, ad quintam partem apicalem, etiam dorsali, postice ad marginem paulo curvatim arcuata, 6^a apicali; caput subtilissime argenteo pubescens, tuberibus antenniferis vix productis, genis fere nullis, vertice longitudinaliter carinato; antennae corpore longiores, subtus fimbriatae, pilis longioribus plus minus regulariter intermixtis, scapo obconico, vix arcuato, basi haud excavato, art. 3 — 6 carinatis, 3 — 5 vix vel non incrassatis, art. 4 praecedente brevior; thorax cylindricus, leniter arcuatus, latitudine duplo longior, basi et ante apicem transversim sulcatus, dorso leniter inaequalis, tuberibus duobus subbasalibus abtusis munito, subtilissime, praesertim lateraliter argenteo pubescens, setis paucis et longissimis passim hirtus, haud distincte punctatus; elytra elongata, parallela, paulo ante apicem sensim angustata, apice singulatim obliquiter emarginata, angulis externis longe spinosis, suturalibus breviter dentatis, dorso leniter deplanata, infra scutellum ad suturam et in medio a basi ad quartam partem posteriorem utrinque depressa, haud punctata; femora clavata, media et postica inermita; tibiae posticae haud carinatae.

Long 6,5 mm. 1 ex.

Hab. Estado de São Paulo: Amparo, Dr. P. Reck leg. Typo na collecção do autor.

Durch die schlanke Form, die Anordnung der Makeln auf den Decken, die abnormale Bewimperung der Antennen sehr ausgezeichnet.

Aus Rio Grande do Sul liegt ein Exemplar vor, bei dem die vorderen drei Makeln der Decken zu einer etwas unregelmässigen Laengslinie zusammenfliessen, waerend der vierte Fleck nicht rundlich sondern linear ist. Diese Form nenne ich Var. *confluens*, n. var., sie ist von gleicher Groesse, una wurde von P.P. Buck in S. Leopoldo gesammelt. Durch die Färbung der Decken erinnert diese Varietat etwas an *Heterachtes implicatus* Thoms.

***Heterachtes mutabilis*, n. sp.**

Modice elongatus, subaepressus, nitidus, nigro-piceus, fronte, antennis pedibusque rufo-ferrugineis, setis in elytris lineatim ordinatis hirtus, elytris utrinque macula minuta humerali, macula sat magna ante medium, dorsali, nec suturam nec marginem attingente, antice plus minus sinuosa, postice leniter dentata, ad quartam partem posteriorem fascia lata, leniter obliqua, antice posticeque dentata, marginem haud attingente, testaceis ornatis; caput punctulato-scabrosum, subtiliter cinereo tomentosum, tuberibus antenniferis obtusis; antennae ♂ corpore tertia parte longiores, ♀ apicem

elytrorum superantes, subtus basi laxe fimbriatae, scapo subgracili, vix arcuato, basi haud excavato, subtilissime punctulato-coriaceo et passim cinereo tomentoso, art. 3 — 6 incrassatis, nec sulcatis nec carinatis, art. 4 tertio modice brevior; thorax cylindricus, vix arcuatus, latitudine sesqui longior, basi leniter transversim sulcatus, dense punctato-coriaceus et cinereo-sericeo tomentosus, dorso in medio transversim denudatus, supra inaequalis, vel obtuse quinque tuberculatus, tuberculo medio oblongo, glabro, subtus vittis duabus argenteo-sericeis, antice abbreviatus ornatus; scutellum minutum, transversum, apice rotundatum, dense cinereo-sericeo tomentosum; elytra elongata, parallela, paulo ante apicem sensim attenuata, apice singulatim rotundata, punctis mediocribus, sublineatim ordinatis, passim cribata, postice laevia; femora clavata, apice inermia; tibiae extus haud carinatae; corpus subtus subtiliter flavescens-cinereo pubescens.

Long. 6 1/2 — 9 1/2 mm. 2♂, 2♀.

Hab. Rep. Costa Rica: Vulcan Irazu, 2800 m., Guayabillos, 2200 m., Ferd. Nevermann leg. Typo na collecção do Snr. Nevermann, cotypa na collecção do autor.

Diese neue Art aehnelt *H. chiriquinus* und *H. integripennis* Bates, ist aber durch die Zeichnung, die Skulptur und die Form verschieden. In gewisser Hinsicht kommt sie auch *H. obtusus* Bates nahe. Von dieser Art giebt Bates (Biol. C. — Am. 1880, p. 264, t. XVII, f. 22) die Varietaet *segregatus* an, die im Cataloge von Aurivillius nicht aufgefuehrt ist. Nach der Zeichnung ist diese Varietaet in der Form von der Type ausserordentlich abweichend, so dass man berechtigte Zweifel hegen kann, dass es sich um eine Varietaet handelt.

Die Zeichnung der Decken ist bei *mutabilis* nicht gleichfoermig. Die oben angegebene Beschreibung passt auf die beiden vorliegenden♀. Bei einem der♂ ist der vor der Mitte stehende, dorsale Fleck durch eine schmale Laengslinie mit dem Schulterfleck verbunden, bei dem anderen♂ fehlt die hintere Querbinde gaenzlich.

Heteractes rubricolor, n. sp.

Elongatus, nitidus, rufo-ruber, elytrorum dimidia parte basali, margine basi excepta, nigra, postice fascia angusta, suturam haud attingente, antice posticeque leniter angulata, flavo marginata, antennis (basi dilutioribus) pedibusque rufo-testaceis, femorum apice late nigro annulata; caput nitidum, glabrum tuberibus antenniferis haud productis, fronte punctis paucis et minutis passim et sublineatim cribata, subtus transversim striatum; antennae♂ corpore plus sesqui longiores, subtus basi sat dense ciliatae, scapo subgracili, vix arcuato, basi haud excavato, art. 3 — 6 incrassatis, haud sulcatis, nec carinatis, art. 4 tertio sesqui brevior; thorax cylindricus, vix arcuatus, latitudine duplo longior, basi et ante apicem leniter transversim sulcatus, supra obsolete tri-tuberculatus, punctis paucis et minutis, etigeris, passim cribatus, prosterni laevi antice transversim striato; elytra elongata, subparallela, paulo ante apicem sensim attenuata, apice obliquiter singulatim emarginata, angulis externis longe, saturalibus brevissime spinosis, modice deplanata, punctis paucis setigeris lineatim

impressa; femora clavata, apice inermia; tibiae extus haud carinatae; corpus subtus subtilissime albido pubescens.

Long. 9 mm. 1 ♂.

Hab. Rep. Costa Rica: Turrialba, P. Schild leg. Typo na collecção do Snr. Nevermann.

In Faerbung erinnert diese Art an *H. cribripennis* Bates, unterscheidet sich aber durch die kaum punktierten Decken etc., deren Spitze ausserdem ganz anders gestaltet ist.

Ibidion immaculipenne, n. sp.

Elongatum, nitidum, piceum vel rufo-piceum, setis flavidis in elytris lineatim ordinatis passim hirtum, subtus flavescence-cinereo sericeum; caput subopacum, dense punctulato-coriaceum, subtilissime passim flavescence-cinereo tomentosum, inter antennas concavum, tuberibus antenniferis productis; antennae ♂ corpore plus sesqui, ♀ tertia parte longiores, basi subtus ciliatae, scapo brevi, clavato, subtiliter punctulato, basi supra sulcato, art. 3 — 5 obtuse carinatis; thorax latitudine sesqui longior, vix arcuatus, cylindricus, ad basim et ante apicem leniter transversim sulcatus, dorso quinque tuberculatus, tuberculo medio modice elongato, sat dense, minute irregulariterque punctatus, pube flavescence-cinerea passim hirtus; scutellum transversum, apice rotundatum, cinereo tomentosum; elytra elongata, subparallela, postice sensim attenuata, apice breviter truncato in singulis, angulis haud productis, punctis mediocribus, sat dense irregulariterque cribata, postice sublaevia; femora clavata, intermedia et postica apice breviter bidentata; tibiae carinatae.

Long. 10 — 15 mm. 4 ex.

Hab. Rep. Argentina: Salta, Dr. L. Witte leg., Corral Quemado, Weiser leg. Typo na collecção do Snr. Bruch, cotypo na collecção do autor.

Diese Art steht der mir leider nur durch die Beschreibung bekannten *I. fuscipenne* Gounelle sehr nahe und ist vielleicht nur als Varietaet aufzufassen, indessen ist die Faerbung und die Behaarung und Punktierung des Halsschildes verschieden.

Eine gewisse Aehnlichkeit besteht auch mit *I. guttiferum* Thoms., aus Columbien, mit der sie die abgestutzten Fluegelspitzen gemein hat.

Ommata (Chrysaethe) globulicollis, n. sp.

♀. Elongata, atra, thorace supra, margine antica nigra excepta, et lateraliter rufo, elytris dorso plumbis, lateraliter atris; caput subnitidum, glabrum, rostro brevi, fronte longitudinaliter sulcata, inordinatim, passim punctata, vertice crebre punctato et carinula tenui in medio longitudinaliter munito, oculorum lobis inferioribus distantibus; antennae abdominis segmentum secundum vix superantes, basi subtus laxe ciliatae, scapo sat grosse et dense punctato, art. 3 — 4 linearibus, 4 — 10 sensim leniter incrassatis, haud serratis; thorax subglobosus, nitidus, dorso longitudinaliter subtilissime striato-punctatus et setis pallidis et erectis passim hirtus, lateraliter punctis

rotundis haud fortiter impressus; scutellum minutum, subtiliter cinereo tomentosum; elytra elongata, abdominis segmenti ultimi medium attingentia, basi thoracis latitudinem maximam subaequantia, lateraliter infra humeros ad medium usque sensim lenissime et arcuatim attenuata dein parallela, apice ipso obliquiter truncato in singulis, angulis suturalibus paulo dehiscentibus et brevissime dentato-productis, dorso nitida, plana ibique sublineatim punctata, punctis posticis sensim minoribus et densioribus, humeris lateribusque sub-opacis, dense punctato-scabrosis, pilis minutis, griseis leniter obnubilata, basi setis pallidis et erectis passim intermixtis; femora punctato-scabrosa, quatuor antica clavata, postica sensim incassata, abdominis segmentum quartum haud superantia; tarsi postici breves, art. 1^o, 2^o et 3^o simul sumptis aequali; corpus subtus opacum, punctulato rugosum, pilis albidis sat dense hirtum.

Long 7 — 8 1/2 mm. 2 ex.

Hab. Estado de S. Catharina: Hansa Humboldt, A. Maller leg. Typo na collecção do autor, cotypo na collecção Maller.

Erinnert an *O. aureicollis* Auriv. unterscheidet sich aber leicht durch Form und Punktierung des Prothorax, anders gefärbte und punktierte Decken etc.

Euryptera costaricensis, n. sp.

Subelongatus, sat ampla, nigra, nitida, supra pilis decumbentibus sat dense vestita, capite (mandibulis, palpis, clypeo, vitta in vertice colloque supra lateraliterque nigris exceptis) rufo-testaceo, thorace rufo-testaceo, vitta dorsali utrinque vitta sat lata laterali nigris elytris nigris, utrinque macula magna basali, nec suturam nec marginem attingente, subquadrata, margine postica angulata fasciaque communi, lata, antice posticeque angulata, coxis intus, meso-et metasterno in medio, abdominis processo intercoxalis rufo-testaceis, femoribus subtus plus minus ferrugineis; caput porrectum, fere glabrum, rostro mediocriter elongato, clypeo transverso, dense punctulato, fronte longitudinaliter sulcata; antennae elytrorum dimidium vix superantes, crassiusculae, art. 3 — 4 brevibus, subaequalibus, 3 — 7 subtus apice setosis, 5 — 10 intus angulatis; thorax latitudine basali brevior, conicus, lateribus vix flexuosis, basi bisinuatus, angulis posticis acutis, subtilissime punctulato-coriaceus; scutellum nigrum, triangulare, nigro tomentosum; elytra basi thorace latiora, humeris rotundatis, ultra medium usque fere parallela, dein sensim paulo dilatata, ante apicem arcuatim angustata, apice ipso late sinuato truncato in singulis, angulis externis et suturalibus breviter spinosis, dorso perparum convexa, utrinque sulcis quatuor sat profunde impressa, subtiliter punctulato coriacea, epipleuris ad dimidium posteriorem dense, sat longe fimbriatis; pedes postici anticis leniter longiores, femoribus posticis abdominis segmentum secundum superantibus, tarsis brevibus, posticis art. 1^o, 2^o et 3^o simul sumptis vix longiore; coxae anticae depressae, processum prosternalem haud superantes; prosterni processus modice latus, arcuatus, postice declivis; mesosterni processus plus duplo latior, antice obtuse tuberculatus et declivis; corpus subtus subtilissime punctulatum, pallide passim tomentosum; abdomen elongatum segmento ultimo truncato, angulis externis spina longa, acuta armatis.

Long. 13 1/2 — 14 mm. 2 ex.

Hab. Rep. Costa Rica: San José, 1000-1200 m. v. Enden e S. Ballou leg. Typo na collecção Nevermann, cotypo na collecção do autor.

In der Form der Vorderhueften und des Pro und Mesosternalfortsatzes steht diese Art *E. planicoxis* Bates sehr nahe, weicht aber durch die andere Faerbung etc. von ihr ab.

Euryptera angustata, n. sp.

Elongata, angusta, nigra, undique breviter suberecte pilosa, capite (mandibulis, palpis, clypeo, vertice colloque supra et lateraliter nigris exceptis) testaceo-rufo, vittis duabus thoracis sublateralibus, elytrorum dimidia parte basali rufo-flavis, aureo pubescentibus, femorum dimidio basali, tibilis anticis subtus, posticis saepius annulo in medio tarsorum art. 1^o et 2^o basi ferrugineis vel rufo-testaceis, caput porrectum subtiliter passim tomentosum, rostro mediocriter elongato, clypeo transverso, dense punctulato, fronte longitudinaliter sulcata; antennae elytrorum dimidium superantes, subcrassae, art. 1 — 5 nigro hirtis, art. 4 praecedente et sequente brevior, art. 5 — 9 intus angulatis; thorax latitudine basali vix brevior, conicus, lateribus flexuosis, basi bisinuatus, angulis posticis subacutis, supra lateraliterque crebre punctulatus, linea media longitudinali glabra, prosterno subtilissime punctulato-coriaceo; scutellum triangulari, nigro-tomentosum; elytra basi thorace perparum latiora, ibi lateraliter subparallela, dein leniter arcuatim attenuata, post medium paulatim subampliata, mox ante apicem iterum angustata, apice late rotundato in singulis, humeris rotundatis, crebre asperaque densissime punctulata, sulcis duobus, dorsalibus, a basi ad quartam partem posteriorem extensis impressa; pedes posticis anticis leniter longiores, femoribus posticis abdominis segmentum tertium vix superantibus, tarsis posticis tibilis longioribus, art. 1^o, 2^o et 3^o simul sumptis multo longiore; coxae anticae exsertae, extus angulatae; prosterni processus angustissimus, arcuatus; mesosterni processus triplo latior subplanus; metasternum subtiliter crebre punctulatum et flavescens-aureo tomentosum; abdomen subtilissime punctulato-coriaceum et cinereo-sericeo tomentosum, segmento ultimo apice dorsali rotundato, ventrali truncato, haud spinoso.

Long. 8 — 8 1/2 mm. 8 ex.

Hab. Estado de S. Catharina; Mafra, A. Maller leg. Typo na collecção do autor, cotypo na collecção Maller.

Diese neue Art erinnert an *E. angustisternis* Goun. von der sie sich durch die geringere Groesse, die andere Faerbung und die laengeren Fuehler leicht unterscheidet. Ferner bestehen Aehnlichkeiten mit *E. Argodi* Belon und *E. venusta* Brême, doch ist die Form der Spitze der Decken star abweichend. Die schwarze Faerbung der Decken, die die Apikalhaelfte umfasst, ist nach vorn nicht gleichmaessig quer begrenzt, sondern dieser Rand ist leicht wellig und an der Naht, dem Schildchen zu, bogig vorspringend.

Euryptera nigrosuturalis, n. sp.

Elongata, nitida, testaceo-rufa, elytris pallidioribus, supra pilis decumbentibus, rufo-aureis dense vestita, vertice inter oculos, mandibulis,

palpis, antennis, scapo excepto, nigris, elytris pallido testaceo-rufis, marginibus lateralibus et posticis vittaque suturali, postice gradatim dilatata nigris, tibiis anticis extus, mediis et posticis summo apicali, tarsorum art. 1^o apice, 2 — 4 totis abdomineque (segmento ultimo, apice excepto) nigris; caput porrectum, subtiliter tomentosum, rostro mediocriter elongato, clypeo glabro, transverso, dense punctulato-coriaceum, fronte longitudinaliter sulcata; antennae abdominis segmenti secundi apicem superantes, basi graciles, apice perparum sensim incrassatae, art. 1 — 5 nitidis et dense punctulatis, 6 — 11 opacis, art. 4 praecedente et sequente brevior; thorax latitudine basali brevior, conicus, lateribus paulo flexuosis, basi bisinuatus, angulis posticis acutis, subtiliter punctulato-coriaceus, linea media longitudinali glabra; scutellum testaceo-rufum, triangulare, rufo-sericeo tomentosum, elytra basi thorace latiora, ibi lateraliter subparallela, dein leniter acuatim attenuata, post medium paulatim subampliata, mox ante apicem iterum angustata, apice ipso late truncato in singulis, angulis externis et suturalibus breviter dentatis, dorso perparum convexa, punctis minutis dense profundeque cribata; pedes postici anticis longiores, femoribus posticis abdominis segmentum tertium superantibus, parvis posticis tibiis longioribus, art. 1^o caeteris simul sumptis longiore; coxae anticae exsertae, extus angulatae; prosterni processus angustissimus, arcuatus; mesosterni processus latior, subplanus; metasternum subtiliter punctulato coriaceum et rufo-aureo tomentosum; abdomen subtilissime coriaceum pubesque cinereo-rufa leviter onubillatum, abdominis segmento ultimo apice rotundato, haud spinoso.

Long. 10 mm. 1 ex.

Hab. Estado de S. Catharina: Mafra, A. Maller leg. Typo na collecção do autor.

Die Form der Beine, die Laenge der hinteren Tarsen und die schlanken Antennen sind denen von *E. dimidiata* und *melanura* Radt. aehnlich. Die Form der Decken weist auf den angegebenen Genus, das vorliegende Stueck halte ich fuer ein ♂. An der Farbe und der Zeichnung der Decken leicht von den bekannten Arten zu unterscheiden.

***Dihammaphora aurovittata* Bates — var. *debilis*, n. var.**

Biol. C. Amer. Col. V. 1.180, p. 61.

Elongata, depressa, opaca, nigra, thorace rufo, pronoto in medio vitta angusta, glabra, nigra, a basi ad medium continuata, apice rotundata lateribusque utrinque macula basali, triangulari, ante medium terminata, intus ad marginem basalem cum vitta connexa etiam nigra et glabra, capite, pronoto vittis duabus, basim haud attingentibus, aurantiaco-sericeo tomentosus, pedibus nigris, nitidis, femoribus basi rufo-testaceis; caput minute punctatum, fronte transversa, longitudinaliter sulcata; antennae 10-articulatae, subtilissime cinereo tomentosae, dimidium elytrorum vix superantes, scapo brevi, crasso, subcylindrico, dense, crebre punctato, haud sulcato, art. 3 — 5 linearibus, 6 — 9 obconicis, apice interno angulatis, 10 elongato, leniter arcuato; thorax latitudine fere duplo longior, subcylindricus, basi modice constrictus, dorso mox ante basim nodis duobus debilissimis instructus, vitta, atque maculis nigris punctulato-scabrosis, lateribus subtilissime cinereo-sericeo tomentosus; scutellum minutum, apice rotundatum, longitudinaliter sulcatum; elytra elongata, plana, basi thorace latiora, subparallela, postice vix ampliata, apice singulatim obliquiter truncata,

angulis vix productis, marginibus posticis haud denticulatis, punctis rotundis, sublineatim ordinatis, haud profunde, dense cribata, subtilissime cinereo tomentosa, setis brevibus passim intermixtis, utrinque biscoata; pedes antici breves, medii posticique elongati, femoribus clavatis, mediis et posticis longe pedunculatis, his apicem elytrorum vix superantibus, tarsis brevibus, art. 1^o, 2^o et 3^o simul sumptis brevioribus; prosterni processus angustus, subplanus, postice dilatatus; mesosterni processus latissimus, planus; acetabula antica posice, media extus clausae; metasternum abdomenque dense cinereo-sericeo tomentosa.

Long. 5 — 6 mm. 4 ex.

Hab. Rep. Costa Rica: San José, La Caja, Schmidt e Nevermann leg. Typo na collecção do Snr. Nevermann, cotypo na collecção do autor.

Die Beschreibung von Bates passt in verschiedener Hinsicht nicht ganz gut auf die vorliegenden Stücke, doch ziehe ich vor, zumal ich *aurovittata* nicht vorliegen habe, sie zunächst als Varietät dieser anzureihen.

Sub-familia LAMIINAE

Desmiphora rufocristata, n. sp.

Elongata, subcylindrica, opaca, picea, pilis longis et erectis, cinereis, undique hirta, pube cinerea et rufa dense vestita; caput inter antennas leniter concavum, piceum, punctis mediocribus sat dense scribatum, dense rufo hirtum, vertice rufo unipenicillato, oculis grosse granulatis, valde emarginatis, lobis superioribus modice distantibus, lobis inferioribus rotundatis, genis brevibus; antennae elytrorum apicem haud attingentes, rufo-ferrugineae, undique setis longissimis dense hirtae, scapo brevi, obconico, art. 3 dimidio brevioribus, art. 3 elongato, leniter flexuoso, 4 praecedente vix brevioribus, 6 — 10 aequilongis et intus leniter serratis; thorax latitudine paulo brevior, lateribus tuberculo obtuso utrinque armatis, irregulariter punctatus dense rufo hirtus, dorso ad basim et ante apicem utrinque lineis duabus, rufo-fuscis, plus minus indistinctis, obliquis decoratus, supra antice rufo tripenicillatus; scutellum triangulare, apice breviter truncatum, rufo-tomentosum; elytra basi thorace latiora et recte truncata, postice gradatim leniter angustata, apice conjunctim rotundata, punctis grossis, lineatim ordinatis, cribata, dense cinereo tomentosa, quarta parte basali, plaga magna, subtrigona, suturali, antice concava, paulo pone medium fasciaque communi, angusta, paulo ante apicem, antice valde concava, rufo-tomentosis ornata, utrinque cristis duabus, modice elongatis, suturam approximatis, rufis munita, 1^a basali, 2^a paulo pone medium, ad declivitatem posteriorem juxta suturam utrinque albido unipenicillata; prosterni processus angustus, antice posticeque declivis; mesosterni processus duplo latior, antice obliquiter declivis; metasternum abdomenque cinereo-rufo hirta.

Longo. 7,75 mm. 2 ex.

Hab. Estado de Goyaz: Jatahy, C. Pujol leg. Typo na collecção do autor.

An der Farbe und den roetlichen Haarbuescheln des Thorax und der Decken leicht zu erkennen.

Obleich die Bewehrung der Seiten des Prothorax nur sehr schwach ist, sind die weiteren Characteristica der gestalt, dass diese Art besser in den angegebenen Genus als zu *Pyrracita* gestent wird.

***Desmiphora pretiosa*, n. sp.**

Elongata, cylindrica, nitida, rufo-picea, pilis longis et erectis, cinereis undique hirta, thorace vittis duabus, obliquis, ad basim connexis elytris fascia lata ad quintam partem apicalem, antice posticeque arcuatim angulata fasciaque angusta apicali et utrinque ad humeros linea obliqua niveo tomentosus, ante vittam subapicalem utrinque lineis tribus, abbreviatis aurantiaco-sericeo tomentosus, 1^a. angusta, suturali, scutellum haud attingente, 2^a. duplo latiore, suturam approximata, 3^a. ad declivitatem lateralem; caput inter antennis leniter concavum, rufo-piceum, pube cinerea passim hirtum, punctis mediocribus irregulariter cribratum, vertice minute fusco unipenicillato, oculis grosse granulatis, valde emarginatis, lobis superioribus inter se modice distantibus, lobis inferioribus magnis, subquadratis, genis fere nullis; antennae apicem elytrorum vix superantes, rufo-ferrugineae, undique, praesertim subtus setis longissimis dense hirtae, scapo modice elongato, obconico, art. 3 tertia parte brevior, art. 3 elongato, 4 praecedente vix brevior, 3 — 4 leniter flexuosis, 6 — 10 aequilongis, intus angulatis; thorax latitudine vix brevior, lateribus tuberculo acuto utrinque armatis, irregulariter sat grosse profundeque punctatus, dorso vittis duabus, antice conjunctis, postice valde divergentibus et ad humeros elytrorum continuatis, niveo-tomentosis, ad marginem anticam in medio penicillo minuto, fusco, in medio penicillis duobus, maioribus, antice niveis, postice fuscis ornatus; scutellum minute fusco penicillatum; elytra basi thorace latiora et recte truncata, postice vix angustata, apice singulatim late rotundata, basi lateraliterque grosse inordinatim et dense punctata, postice laevie, ferrugineo-rufa, ad quintam partem posteriorem fascia lata niveo tomentosa, marginibus antica et postica tomento niveo valde densiore et curvatim biangulatis, angulis posticis juxta suturam obsolete niveo penicillatis; prosterni processus angustus, antice posticeque declivis; mesosterni processus duplo latior, antice obliquiter declivis; metasternum abdomenque cinereo hirta.

Long. 8 mm. 2 ex.

Hab. Estado de Goyaz: Jatahy, C. Pujol leg. Typo na collecção do autor, cotypo na collecção do Museu Paulista.

Auch diese Art passt besser in den angegebenen Genus als zu *Pyrracita*. In der Faerbung erinnert sie an *D. cucullata* Thoms., unterscheidet sich aber leicht durch die goldgelben Linien auf der Mitte der Decken.

***Desmiphora crocata*, n. sp.**

Elongata, cylindrica, nitida, rufo-picea, elytrorum quinta parte apicali antennisque pallidioribus, capite thoraceque flavescendo-cinereo hirtis, elytris lineis duabus transversis, 1^a. basali, altera ad sextam partem

anterorem, juxta humeros plus minus dilatatis ibique vittas indistinctis formantibus, flavescente cinereis, ad quintam partem posteriorem fascia lata, pluripenicillata, antice posticeque angulata, niveo-tomentosis, ante fasciam plaga communi, dorsali, aurantiaco-sericea; caput inter antennis leniter concavum, piceum, flavescendo-cinereo hirtum, punctis mediocribus et profundis passim cribratum, vertice fusco bipenicillato, oculis grosse granulatis, valde emarginatis, lobis superioribus inter se modice distantibus, lobis inferioribus magnis, rotundatis, genis brevibus; antennae apicem elytrorum vix superantes, infra longe et dense pilosae, (scapo fusco excepto) rufo-testaceae, scapo obconico, art. 3 tertia parte brevior, 3 — 4 leniter flexuosis, 6 — 10 aequilongis, intus angulatis; thorax latitudine vix brevior, lateribus tuberculo acuto utrinque armatis, irregulariter sat grosse profundeque punctatus, dense flavescendo-cinereo, (dorso linea longitudinale denudata excepta) hirtus, ad marginem anticam in medio penicillo fusco, in medio penicillis duobus, maioribus, antice cinereis, postice fuscis ornatus; scutellum transversum, apice rotundatum, pube fusca hirtum, elytra basi thorace latiora et recte truncata, postice vix angustata, apice singulatim late rotundata, dimidio basali grosse, dense profundeque punctata, postice laevia, ad quartam partem anteriorem utrinque penicillis minutis duobus, transversim ordinatis, cinereis ornata, fascia postica ad marginem anticam et posticam utrinque penicillis tribus munita; prosterni processus angustus, antice posticeque declivis; mesosterni processus duplo latior, subplanus, corpus subtus dense cinereo hirsutum.

Long. 12 mm. 2 ex.

Hab. Estado de Goyaz: Jatahy, C. Pujol leg. Typo na collecção do autor, cotypo na collecção do Museu Paulista.

Aehnelt *D. pretiosa*, ist aber durch die andere Faerbung der Behaarung leicht zu unterscheiden.

Desmiphora x-signata, n. sp.

Elongata, subcylindrica, opaca, testacea, capite scapoque fuscis, dense flavescendo-cinereo hirta, thoracis dorso elytrorumque basi plus minus infuscatis, his paulo ante medium litura communi, litteram X simulante, antice pone basim in cristam elongatam, fuscam ferminata, fusca, ad declivitatem posteriorem fascia albida, sat lata, antice leniter concava, utrinque in medio minute unipenicillata, et ante fasciam utrinque in medio penicillo flavescendo-fusco, antice ad suturam lineam angustam, cineream curvatim emittente ornatis; caput inter antennis leniter concavum, piceum, dense cinereo-fusco hirtum, punctis mediocribus et profundis dense cribratum, vertice fusco bipenicillato, oculis grosse granulatis, valde emarginatis, lobis superioribus inter se modice distantibus, lobis inferioribus magnis, subquadratis, genis brevibus; antennae apicem elytrorum haud attingentes, undique, praesertim subtus setis longissimis hirtae, art. 4 apice, 5 — 11 totis leniter infuscatis, scapo brevi, obconico, art. 3 tertia parte brevior, art. 3 elongato, 4 praecedente vix brevior, 3 — 4 vix flexuosis, 6 — 10 aequilongis, intus angulatis; thorax latitudine vix brevior, lateribus tuberculo minuto, acuto utrinque armatis, punctis mediocribus passim cribratus, dorso cristis duabus, ad marginem anticam conjunctis, postice valde divergentibus, extus fusco marginatis, dense flavescendo-cinereo hirtis ornatus; elytra basi thorace latiora et recte truncata, postice vix angustata, apice conjunctim rotundata, irregulariter, dense grosse profundeque punctata, postice laevia;

prosterni processus angustus, antice declivis, postice leniter arcuatus; mesosterni processus vix latior, subplanus; corpus subtus dense flavescens — cinereo hirtum.

Long 7 mm. 1 ex.

Hab. Estado de Pernambuco: Tapéra, Don B. Pickel leg. Typo na collecção do autor.

Eine durch die Zeichnung der Decken sehr ausgezeichnete Art.

Desmiphora Spitzii, n. sp.

Elongata, subcylindrica, supra subnitida, subtus opaca, undique setis pallidis et erectis passim hirta, rufo-picea, elytris apicem versus pallidioribus, femoribus, basi excepta, nigris, ante apicem anguste niveo annulatis, tibiarum dimidio apicali tarsisque testaceo-rufis, supra et subtus tomento flavescens-rufo sat dense vestita; caput inter antenas haud concavum, rufo-piceum, dense rufo-piceo tomentosum, punctis minutis passim cribratum, vertice minute rufo-piceo unipenicillato, oculis grosse granulatis, lobis superioribus inter se modice distantibus, lobis inferioribus rotundatis, genis brevibus; antennae elytrorum apicem vix superantes, rufo-piceae, art. 1 — 3 totis, 4 dimidio basali pube nivea et elongata vestitis, infra longe, passim pilosae, art. 3 dimidio apicali, 4 toto, 5 dimidio basali infra densissime, longe fusco fimbriatis, scapo obconico, art. 3 tertia parte brevior, art. 3 modice elongato, 4 praecedente haud brevior, 3 — 4 leniter flexuosis, 6 — 10 aequilongis, intus angulatis; thorax latitudine vix brevior, lateribus tuberculo acuto utrinque armatis, irregulariter sat grosse profundeque punctatus, rufo-piceus, supra antice flavescens-rufo tripenicillatus, lateraliter utrinque lineis angustissimis, longitudinalibus et transversis circiter 6, quarum und ad humeros continuata, dense niveo tomentosus; scutellum transversum, apice late rotundatum, rufo tomentosum; elytra basi thorace latiora et recte truncata, postice gradatim leniter angustata, apice conjunctim rotundata, grosse profundeque, ad basim dense, postice passim punctata, apice sublaevia, paulo ante medium ad suturam litura communi, minuta, litteram V simulante, nivea, utrinque in medio macula transversa, dorsali picea et paulo ante apicem plaga marginali, subtriangulari, ad suturam lineas duas finissimis emittente et ad angulum internum longissime unipenicillata, niveo-tomentosa ornata; prosterni processus angustus, antice posticeque declivis; mesosterni processus duplo latior, antice obliquiter declivis.

Long. 7 mm. 1 ex.

Hab. Estado de São Paulo: Ypiranga, R. Spitz leg. a quem dedico esta especie. Typo na collecção do autor.

Diese Art weicht von allen bislang bekannten durch die dichte, fast bueschelfoermige Behaarung am 3, 4 und 5. Fuehlergliede stark ab und kann daran leicht erkannt werden.

Rhaphiptera obtusipennis, n. sp.

Elongata, subcylindrica, brunnea, elytris pedibusque pallidioribus, capite, thorace supra et lateraliter, scutello, episterno mesothoracis ochraceo pubescentibus, elytris (basi ochraceo excepto ibique lituram fuscam, litteram

V simulante, ornatis), corpore subtus, femoribus tibiisque cinereo-sericeo tomentosus, antennis tarsisque fuscis; caput inter antennis concavum, inordinatim, grosse profundeque brunneo punctatum, fronte plana, transversa, longitudinaliter minute sulcata, oculis grosse granulatis, valde incis, lobis superioribus modice distantibus, lobis inferioribus magnis, subquadratis, genis brevibus; antennae ♀ corpore longiores, subtiliter fusco villosae, subtus sat dense, longe fimbriatae, scapo curto, clavato; thorax transversus, lateraliter in medio tuberculo validissimo et acuto utrinque armatus, dorso tuberibus duobus, rotundatis, nigris, nitidis antice munitus, punctis brunneis, grossis et profundis, sat dense irregulariterque cribatus, prosterno dense cinereo pubescens, sub pube haud distincte punctato; scutellum magnum, apice rotundatum, dense ochraceo tomentosum; elytra elongata, leniter convexa, basi thoracis latitudinem maximam vix latiora, subparallela, ante apicem arcuatim angustata, apice singulatim rotundata, basi nec tuberculata nec cristata, punctis numerosis, brunneis et mediocribus sat dense irregulariterque cribata, ad quintampartem apicalem laevia; pedes mediocres, femoribus gradatim incrassatis, tibiis anticis in medio dente parvo ad apicem dente valido armatis, coxis anticis extus angulatis; prosterni processus modice latus, postice fortiter arcuatus; mesosterni processus duplo latior, obliquus.

Long 17 mm. 1 ex.

Hab. Estado do Rio de Janeiro: Corcovado, Dr. Lauro Travasso leg., Typo na collecção do autor.

Der *R. candicans* Goun. sehr ähnlich, unterscheidet sich durch die abgerundeten Flügelspitzen, das Fehlen der Makel in der Mitte der Decken und die etwas verschiedene Zeichnung. Es ist immerhin nicht ausgeschlossen, dass es sich um das ♀ von *candicans* handelt.

Ptericoptomimus, n. gen. (Estolini)

Elongatus, sat robustus, subcylindricus, tomentosus, supra setosus; caput haud retractum, inter antennis vix concavum, tuberibus antenniferis basi distantibus, fronte transversa, longitudinaliter sulcata, plana, oculis grosse granulatis; antennae apicem elytrorum vix attingentes, 11-articulatae, subtus basi ciliatae, scapo modice elongato, obconico, art. 3 vix brevior, 4 praecedente leniter longiore, caeteris gradatim modice decrescentibus; thorax subquadratus, dorso convexus, lateraliter in medio spina minuta, obtusa armatus; elytra basi thorace valde latiora, ab humeris ad apicem sensim perparum attenuata, apice ipso late sinuato truncato, angulis suturalibus paulo productis, externis dentatis; pedes breves, subaequales, femoribus gradatim fortiter incrassatis, tibiis mediis extus sinuosis, tarsis brevibus, unguiculis divaricatis; coxae anticae extus angulatae; acetabula antica postice, media extus clausae; prosterni processus arcuatus, modice latus, postice dilatatus; mesosterni processus duplo latior, subplanus; abdomen parallelum, segmentis 2-5 subaequalibus, segmenti ultimi pygidiique margine postica latissime truncata, angulis externis rotundatis.

Dieser Genus stimmt im Habitus mit *Ptericoptus* ueberein. Im Gegensatz zu diesem letzteren sind bei dem neuen Genus die Krallen vollkommen gespreizt (*divariqués*). Diese Eigenschaft,

der Sinus an den Tibien der Mittelbeine, die geschlossenen Hueften des zweiten Beinpaares, die aussen winkeligen Vorderhueften etc. verweisen auf die angegebene Gruppe. Das eigenartig geformte, letzte Abdominalsegment ist charakteristisch fuer diesen Genus.

Genotypus: *P. truncatus* n. sp.

***Ptericoptomimus truncatus*, n. sp.**

Sat robustus, nigro-piceus, thorace lineis duabus, longitudinalibus, sublateralibus, utrinque lateraliter linea vix latiora, a basi ad medium extensis, flavescence-cinereo tomentosis, elytris juxta suturam punctis numerosis et irregularibus, saepius confluentibus, postice densioribus punctisque paucis submarginalibus pone medium cinereo tomentosis ornatis, antennis piceis vel rufo-piceis, scapo subtus pube flavescence, extus deniore, ibique fere vittam formante hirta, art. 1-7 et 9-11 basi cinereo annulatis, 8 apice excepto, cinereo, corpore subtus cinereo-fusco tomentoso, abdomine segmentis 1-4 lateraliter utrinque puncto flavescence cinereo ornato; caput subopacum, flavescence-cinereo ornato; caput subopacum, flavescence-fusco tomentosum, setis longioribus et erectis intermixtis, fronte punctis duobus, minutis, transversim ordinatis, flavotomentosis ornata, punctis mediocribus dense profundeque criatum, oculis magnis, valde incis, lobis superioribus modice distantibus, lobis inferioribus elongatis, genis brevibus; thorax subnitidus, flavescence-fusco tomentosus, setis longioribus et semierectis passim intermixtis, punctis grossis et profundis dense criatus; scutellum transversum, apice rotundatum, dense flavescence-fusco tomentosum; elytra subopaca, modice convexa, flavescence-fusco tomentosa, setis nigris semierectis, lineatim ordinatis hirta, dorso sulcis duobus, absoletis, uno juxta suturam, altero ad declivitatem lateralem longitudinaliter utrinque impressa, lineatim mediocriter punctata, punctis apicem versus utrinque impressa, lineatim mediocriter punctata, punctis apicem versus obsoletioribus; pedes dense cinereo-fusco tomentosi, setis longioribus et pallidis intermixtis, femoribus posticis abdominis segmentum secundum superantibus, tarsis posticis brevibus, art. 1^o, 2^o et 3^o simul sumptis breviora.

Long. 9 1/2 — 11 — mm. 2 ex.

Hab. Estado de São Paulo: Capital, Bosque da Saude, colleccionado pelo autor; Estado do Rio de Janeiro: Itatiaia, 700 m., J. F. Zikán leg. Typo do Itatiaia na colleção do autor.

***Acanthoderes versicolor*, n. sp.**

Modice robusta, subdepressa, oblongo-ovata, supra subopaca, subtus nitida, nigra, labro, abdominis segmento ultimo ventrali testaceo-rufis, capite thoraceque punctis paucis rufo-testaceo tomentosis passim decoratis, elytris fasciis nigris, albis et rufo-flavis variegatis, scilicet: 1^a. basali, subnuda, nigra, punctis rufo-testaceo-tomentosis passim variegata, 2^a. sat lata, albo tomentosa, ante medium, antice posticeque angulata, extus modice angustata 3^a. rufo-flavo tomentosa, lata, in medio, antice posticeque valde angulata, postice sat late nigro marginata, 4^a. apicali, albo tomentosa, fasciam indistinctam clare rufo testaceam includente, antennarum art. 3-11, apice excepto, flavescence-cinereo tomentosis, pedibus nigris, femorum clavis plus minus rufo-ferrugineis, flavescence-cinereo tomentosis, tibiis flavescence-cinereo sat late annulatis, tarsis nigris, art. ultimo rufo-testaceo, mediis et

posticis art. 1-2 dense cinereo tomentosus; caput modice latum, inter antennas haud concavum, fronte transversa, plana, longitudinaliter sulcata, subtiliter punctulato scabrosum, vertice convexo, sulcato, oculis minute granulatis, valde incisis, lobis superioribus distantibus, lobis inferioribus subquadratis, genis oculorum lobis inferiores aequalibus; antennae apicem elytrorum vix superantes, 11-articulatae, scapo brevi, modice clavato, art. 3 sequente longiore, 5-11 gradatim decrescentibus; thorax transversus, lateraliter tuberculo valido, obtuso utrinque armatus, dorso tuberculis duobus nitidis, sat magnis munitus, callo elongato obtuso in medio, punctis mediocribus irregulariter cribatus; scutellum transversum, magnum, apice rotundatum, longitudinaliter sulcatum, nigrum, sulco plus minus cinereo tomentoso; elytra subconvexa, basi thorace latiora, postice attenuata, apice ipso breviter truncato in singulis, angulis vix productis, ad basim, praesertim juxta scutellum subtilissime nigro granulata, passim sublineatim punctata, callis centrobasalibus vix elevatis, singulatim obsolete bicosata; pedes breves, femoribus valde clavatis, tibus anticis gradatim dilatatis, σ tarsis anticis dilatatis, nigro ciliatis, art. 4^o antice flavo-testaceo ciliato; φ tarsis anticis vix dilatatis haud ciliatis.

Long. 6 1/2 — 7 mm. 2 ex.

Hab. Estado de Santa Catharina: Nova Teutonia, Plaumann leg. Typo na collecção do autor.

Duerfte dem aus Perú bekannt gewordenen *A. leucogaea* Er. nahe stehen, unterscheidet sich durch die andere Faerbung.

Acanthoderes armata, n. sp.

Robusta, elongata, modice depressa, picea nitida subtiliter cinerascens tomentosa, elytris pone medium plaga magna, lateraliter, antice posticeque angulata, suturam haud attingente et paulo ante apicem macula marginali, plus minus indistincta, fusco tomentosis, antennis fuscis, art. 3-11 basi cinereo annulatis, femoribus intermedialis apice bidentatis, posticis bispinis, spinis externis duplo longioribus; caput amplum, cinereo tomentosum, fronte plana, transversa, passim mediocriter punctata, vertice convexo, longitudinaliter sulcato, tuberculis antenniferis distantibus, genis oculorum lobos inferiores aequalibus, nigris, nitidis, oculis grosse granulatis, breviter bipartitis, lobis superioribus distantibus, lobis inferioribus quadratis; antennae φ corpore longiores, 11-articulatae, subtus sparsim ciliatae, scapo brevi, clavato, art. 3 longitudinaliter sulcato, elongato, sequente fere duplo longiore, caeteris gradatim decrescentibus; thorax transversus, passim grosse punctatus, lateraliter in medio tuberculo magno, acuto utrinque armatus, supra carina media et tuberculo utrinque dorsali, elongato et valde elevato instructus; scutellum magnum, transversum, apice late truncatum, cinereo-fusco tomentosum, longitudinaliter sulcatum; elytra subdepressa, postice attenuata, apice ipso obliquiter truncata in singulis, angulis suturalibus haud productis, externis longe spinosis, ad basim inter scutellum et humerum carina elevata et tuberculata instructa ibique tuberculis minutissimis passim scabrosa, postice laevia; pedes mediocres, femoribus valde clavatis, subtiliter cinereo tomentosus, tibus fuscis, cinereo-fusco biannulatis, anticis gradatim leniter dilatatis, tarsis anticis φ simplicibus; prosterni processus latus, postice arcuatus; mesosterni processus vix latior, antice obliquiter truncatus; corpus subtus passim cinerascens tomentosum.

Long. 14 mm. 1 ex.

Hab. Estado do Amazonas: Teffé, H. C. Boy leg. Typo na collecção do autor.

Durch die bewehrten, hinteren Oberschenkel von allen bekannten Arten verschieden. In Form und Zeichnung erinnert diese neue Art etwas an *A. jaspidea* Germ.

***Acanthoderes alboguttata*, n. sp.**

Robusta, oblongo-ovata, convexa, picea, flavescens-fusco tomentosa, elytris ad quartam partem posteriorem guttis numerosis, irregularibus, inordinatim ordinatis, fasciam simulantibus, niveis decoratis, antennis piceis, flavescens-piceo tomentosis, scapo in medio, art. 3, 9-11 basi (4-8 basi et medio niveo annulatis, tibiis ad basim, in medio et ad apicem niveo annulatis, vel maculatis; caput modice latum, inter antennas concavum, fronte transversa, plana, longitudinaliter sulcata, vertice convexo, sulcato, sub pube haud distincte punctatum, oculis grosse granulatis, valde incis, lobis superioribus modice distantibus, lobis inferioribus rotundatis, genis mediocribus; antennae apicem elytrorum superantes, 11-articulatae, scapo brevi, modice clavato, art. sequente haud longiore, 5-11 gradatim decrescentibus; thorax transversus, dorso antice tuberculis duobus, magnis, prominentibus munitus, lateraliter tuberculo conico, obtuso utrinque armatus, passim minute irregulariterque punctatus; scutellum triangulare, apice rotundatum flavescens-fusco tomentosum; elytra convexa, ampla, postice attenuata, apice ipso breviter oblique truncato in singulis, angulis obtusis, sublineatim grosse punctata callis centrobasalibus elongatis, elevatis; pedes mediocres, femoribus valde clavatis, tibiis anticis haud dilatatis, tarsis (♀?) nec dilatatis nec ciliatis.

Long. 7 mm. 1 ex.

Hab. Estado de Santa Catharina: Hansa-Humboldt. A. Maller leg. Typo na collecção do autor.

Eine durch die Zeichnung sehr auffällige Art. Diese Art stelle ich nur mit gewisser Reserve in den angegebenen Genus. Der Ksof ist kleiner als bei typischen Formen, zwischen den Antennen reichlich konkav, die Decken weisen keine Laengsrippen auf etc. Leider ist noch ungewiss, wie die Tarsen der Vorderbeine der ♂ gestaltet sind.

***Acanthoderes analis*, n. sp.**

Robusta, convexa, atra, subopaca, capite thoraceque punctis flavescens-rufis tomentosis passim decoratis, elytris dorso pube flavescens-rufa subtilissime hirtis, punctis paucis, flavescens-rufis tomentosis juxta basim et ad tertiam partem anteriorem ibique fasciam plus minus indistinctam, pluri interruptam formantibus, sexta parte apicali flavescens-rufis tomentosis, antice cinereo marginata, in medio utrinque punctis duobus nigris, transversim ordinatis, postice plus minus cinereo marginatis includente, antennarum art. 4-11 basi cinereo annulatis, pedibus nigris, passim cinereo tomentosis, tibiis in medio cinereo annulatis, tarsis ultimo vel 3-4 rufotestaceis, mediis et posticis 1-2 dense cinereo tomentosis; caput modice latum, inter antennas haud concavum, fronte transversa, plana, longitudi-

naliter sulcata, vertice convexo, sulcato, punctis mediocribus cribratum, oculis minute granulatis, bipartitis, lobis superioribus distantibus, lobis inferioribus subquadratis, genis elongatis, oculorum lobos inferiores longioribus; antennae apicem elytrorum haud attingentes, 11-articulatae, scapo brevi, clavato, art. 3 elongato, sequente leniter longiore, 5-11 brevibus; thorax transversus, dorso antice tuberculis duobus, nitidis, magnis, prominentibus munitus, lateribus tuberculo valido obconico armatis, punctis minutis sat dense profundeque cribratus; scutellum magnum, transversum, apice rotundatum, atrum, longitudinaliter sulcatum, sulco glabro; elytra convexa, amplam postice attenuata, apice ipso breviter oblique truncato in singulis, angulis haud productis, punctis sat grossis, sublineatim ordinatis passim cribrata, collis centrobasalibus, modice elevatis, singulatim obsolete unicos-tata; pedes breves, femoribus valde clavatis, tibiis anticis sensim fortiter dilatatis, σ tarsis anticis dilatatis, nigro ciliatis.

Long. 7-8 m.m. 2 ex.

Hab. Estado de Santa Catharina: Hansa-Humboldt, A. Maller leg. Typo na collecção do autor, cotypo na collecção Maller.

Diese Art, die durch die Zeichnung leicht erkenntlich ist, muesste in Hinsicht auf die Koerperform, Antennen etc. in den Genus *Scleronotus* gestellt werden, die kraeftige Tuberkel an jeder Seite des Thorax veranlassen mich aber, sie dem angegebenen Genus einzureihen.

Acanthoderes Schmithi, n. sp.

Elongata, robusta, subdepressa, supra opaca, subtus nitida, tomento griseo-coerulescente vestita, thorace tuberculis duobus dorsalibus extus nigro-velutinis, scutello cinereo tomentoso, extus nigro marginato, elytris macula irregulari, suturali, ad quartam partem anteriorem lineisque abbreviatis, praesertim in medio, ad suturam lateraliterque, longitudinalibus et transversis, utrinque fasciis tribus atro-coerulescente-velutinis niveo, squamuliforme, plus minus dense, marginatis, 1^a. laterali, pone humeros, subtriangulari, 2^a. pone medium, valde dentata, extus valde amplia 3^a. ante apicem, dentata, extus ampliata, suturam attingente, antennis atris, art. 3-7 basi et apice, 8-11 basi albido annulatis, pedibus nigris, griseo-coerulescente tomentosus, femoribus tibisque nigro biannulatis, tarsis cinereo tomentosus art. 1^o basi, 2^o margine postica, 3^o toto, 4^o dimidio apicali nigris; caput amplum, sub pube haud distincte punctatum, fronte transversa, plana, dense cinereo tomentosa, longitudinaliter sulcata, tuberculis antenniferis distantibus, vertice convexo, nigro, inter oculos punctis paucis, grossis profunde cribrato, genis modice elongatis oculis grosse granulatis, profunde incisus, lobis superioribus distantibus, lobis inferioribus quadratis; antennae filiformes, 11-articulatae, subtus sparsim-ciliatae, σ o corpore sesqui longiores, φ plus quam 3 articulis apicem elytrorum superantes, scapo brevi, clavato, art. 3 sequente vix longiore, caeteris gradatim decreascentibus; thorax transversus, lateraliter in medio tuberculo acuto utrinque armatus et grosse, sat dense profundeque punctatus, supra passim irregulariterque punctatus, carina media et tuberculo utrinque dorsali, elongato, modice elevato instructus; scutellum magnum transversum, apice truncatum; elytra subdepressa, postice attenuata, apice ipso obliquiter truncato in singulis, angulis suturalibus et externis vix productis, ad basim inter scutellum et

humerum carina, modice elevata et tuberculata instructa, inordinatim grosse punctata, postice laevia; pedes mediocres, femoribus valde clavatis, tibiis anticis gradatim leniter dilatatis, tarsis anticis ♂ vix dilatatis et ciliatis, ♀ simplicibus; prosterni processus modice latus, postice arcuatus; mesosterni processus duplo latior, antice obliquiter truncatus; corpus subtus subtiliter cinereo-coerulescente tomentosum.

Long. 11 — 15 mm. 8 ex.

Hab. Estado de Santa Catharina: Joinville, C. Schmith leg. Hansa-Humboldt, A. Maller leg. Typo na collecção do autor, co-typo na collecção do Snr. Maller.

Herrn C. Schmith freudlichst gewidmet.

Der *A. atrosignata* sowohl in Faerbung als auch durch die Form der Fuehler aehnlich.

Acanthoderes itatiayensis, n. sp.

Elongata, modice robusta, subdepressa, supra opaca, subtus nitida, nigra, supra dense flavescens-cinereo tomentosa, nigro maculata et fasciata; caput sat amplum, nigrum, punctis paucis et mediocribus passim cribratum, fronte plana, transversa, haud longitudinaliter sulcata, passim flavescens tomentosa, tuberculis antenniferis distantibus, genis modice elongatis, oculis grosse granulatis, profunde incisus, lobis superioribus modice distantibus, lobis inferioribus subquadratis; antennae, scapo nigro excepto, rufo-testaceae, art. 2-11 apice nigro annulatis, subtiliter cinereo tomentosae, subtus setis raris hirtae, ♂ apicem elytrorum vix superantes, ♀ haud attingentes, scapo brevi, clavato, art. 3-4 elongatis, aequalibus, caeteris gradatim decrescentibus; thorax transversus, lateraliter paulo ante medium tuberculo valido et acuto utrinque armatus, dorso utrinque lateraliter tuberculo elongato, elevato, nigro tomentoso instructus, lateraliter dense flavescens-cinereo tomentosus, supra inter tuberculos plaga sat magna, plus minus cordiformi, punctum nigrum includente, postice ad scutellum lineam augustam emittente, cinereo-tomentosa ornatus, prosterno nigro, subtiliter passim flavescens tomentosus, punctis paucis passim cribratus; scutellum magnum, subquadratum, atrum, in medio linea angustata, postice dilatata ibique punctum minutum, nigrum includente, niveo-tomentoso ornatum; elytra subdepressa, postice modice attenuata, apice ipso obliquiter truncato in singulis, angulis externis fortiter dentato-productis, dorso utrinque carina, ante apicem terminata, instructa, punctis grossis, setigeris cribrata, setis minutissimis, albis, dense flavescens-cinereo tomentosa, plaga irregulari, circumscutellari, ante medium litura communi, plus minus indistincta, litteram V simulante, paulo pone medium fascia communi, extus valde abbreviata, ad quintam partem posteriorem macula transversa, suturali maculaque utrinque marginali paulo ante apicem et punctis paucis, lineatim ordinatis, praesertim ad suturam et ad marginem exteriorem nigro-tomentosis ornata; pedes mediocres, nigri, femoribus valde clavatis, apicem versus dense flavescens-cinereo tomentosus, tibiis flavescens-cinereo tomentosus, nigro biannulatis, anticis gradatim leniter dilatatis, tarsis nigris, ♂ anticis modice dilatatis, haud ciliatis, ♀ simplicibus; prosterni processus modice latus, postice valde arcuatus; mesosterni processus duplo latior, antice obliquiter truncatus; metasternum abdomenque passim flavescens-cinereo tomentosa.

Long. 8 — 8,5 mm. 2 ex.

Hab. Estado do Rio de Janeiro: Itatiaya, J. F. Zikán leg. Typo na collecção do autor.

Durch die Zeichnung der Decken erinnert diese Art an *A. seminigra* Bates, sie sind aber viel laenger, flacher und haben eine andere Skulptur.

Scleronotus Travassosi, n. sp.

Curtus, robustus, opacus, piceus, subtiliter fusco-flavo tomentosus, elytris linea angusta basali, extus abbreviata, scutellum circumdante, paulo ante medium utrinque linea transversa, irregulari, marginali, suturam haud attingente, ad quartam partem posteriorem linea communi, transversa, flavescente-tomentosis, antennis piceis, art. 4-11 basi cinereo annulatis, tarsis cinereo tomentosis; caput amplum, dense flavo-fusco tomentosum, punctis mediocribus passim eribatam, fronte plana, transversa, haud longitudinaliter sulcata, tuberibus antenniferis distantibus, genis elongatis, oculis minute granulatis, bipartitis, lobis superioribus distantibus, lobis inferioribus transversis; antennae quintam partem posteriorem elytrorum attingentes, subtiliter flavescente tomentosae, subtus setis raris hirtae, scapo brevi, obconico, art. 4 tertio dimidio brevior, caeteris subaequalibus, thorax transversus, dense profundeque punctatus, dorso subplanus, haud carinatus, lateribus paulo ante medium utrinque angulato-dilatatis; elytra ampla, basi recte truncata, humeris obtusis, dorso subdepressa, apice valde declivia, postice attenuata, apice ipso breviter truncato in singulis, angulis haud productis, tuberibus centrobasalibus obtusis, ad basim regulariter, passim scabroso punctata, punctis apicem versus sensim minoribus; pedes mediocres, subtiliter flavescente tomentosi, femoribus valde clavatis, tibiis anticis gradatim fortiter dilatatis, tarsis anticis leniter dilatatis et ciliatis; prosterni processus latus, postice arcuatus; mesosterni processus duplo latior, antice obliquiter truncatus; metasternum abdomenque subtiliter punctulato-scabrosa.

Long. 8 mm. 1 ex.

Hab. Estado do Rio de Janeiro: Corcovado, Dr. Lauro Travassos leg. a quem dedico esta especie.

Durch die Zeichnung der Decken leicht von allen bekannten Arten zu unterscheiden. Die Form des Halsschildes duerfte der von *S. angulatus* Aurivillius nahe kommen.

Scleronotus flavosparsus, n. sp.

Robustus, curtus, fusco-piceus, tomento flavescente, punctis lineis maculisque formante, irregulariter vestitus, antennis piceis, art. 4-11 basi cinereo annulatis; caput amplum, flavescente tomentosum, fusco piperatum, passim punctatum, fronte plana, transversa, haud longitudinaliter sulcata, tuberibus antenniferis distantibus, genis elongatis, oculis minute granulatis, bipartitis, lobis superioribus distantibus, lobis inferioribus transversis, subquadratis; antennae quintam partem posteriorem elytrorum attingentes, subtiliter flavescente tomentosae, subtus setis raris hirtae, scapo brevi, obconico, art. 4^o tertio dimidio brevior, caeteris subaequalibus; thorax transversus, sat dense profundeque punctatus, dorso modice convexus, subtiliter carinatus, lateribus obtuse leniter rotundatis, flavescente tomentosus,

fusco piperatus, dorso ad basim, ante scutellum macula subquadrata et utrinque lateraliter vitta plus minus indistincta, ante apicem terminata, flavo tomentosus; scutellum magnum, subquadratum, piceum, lateraliter passim flavescens tomentosum; elytra ampla, basi recte truncata, humeris obtusis, dorso subdepressa, apice valde declivia, ante declivitatem utrinque costis tribus, abbreviatis instructa, postice attenuata, apice ipso breviter oblique truncato in singulis, angulis suturalibus subrectis, externis dentato-productis, tuberibus centrobasalibus leniter elevatis, haud distincte punctata, tomento flavescens, punctis lineis maculisque formante vestita, quarum 12 perspicuoribus, scilicet: 2 vittas abbreviatas juxta scutellum, 1 macula, subrotundata, communi, suturali, paulo ante medium, utrinque 3 maculas rotundatas, transversim ordinatas, ante medium, ad declivitatem posteriorem fascia et paulo ante apicem utrinque macula rotundata; pedes mediocres, flavescens tomentosi, fusco piperati, tibiis fusco biannulatis, tarsis flavescens-cinereo tomentosus, art. 3^o fusco, tibiis anticis gradatim dilatatis, tarsis anticis vix dilatatis, haud ciliatis; prosterni processus latus, postice arcuatus; mesosterni processus duplo latior, antice obliquiter truncatus; corpus subtus flavescens tomentosum, fusco piperatum.

Long. 8,5 mm. 1 ex.

Hab. Estado de São Paulo: Capital, colleccionado pelo autor; typo na colleção do autor.

Auch diese neue Art ist durch die Faerbung leicht kenntlich.

Anisopodus varius, n. sp.

Oblongus, subdepressus, postice angustatus, supra opacus, subtus nitidus, rufo-piceus, cinereo tomentosus, pronoto rufo-piceo, vitta dorsali, in medio late dilatata et punctis quatuor vel lineis duabus sublateralibus plus minus indistinctis, cinereo tomentosus, elytris cinereo tomentosus punctis numerosis, rotundatis, sat magnis, plus minus inordinatim ordinatis, saepe confluentibus, utrinque macula sat magna juxta scutellum, subquadrata, ad trientem apicalem fascia lata, suturam haud attingente, antice posticeque angulata, rufo-piceis ornatis, antennis piceis, art. 3-6 basi rufo-testaceis; caput fusco-cinereo tomentosum, sub pube haud distincte punctatum, inter antennas vix concavum, fronte plana, transversa, longitudinaliter sulcata, oculis minute granulatis, valde incisus, lobis superioribus modice distantibus, lobis inferioribus magnis subquadratis, genis brevibus; antennae elongatae, tenues, subtus setis raris breviter obsitae, scapo elongato, basim elytrorum vix attingente; thorax transversus, lateribus vix dilatato-rotundatis, spinis minutissimis, acutis, rorsum curvatis, angulis posticis aproximatis, passim minute punctatus; scutellum triangulare, apice rotundatum, rufo-piceum; elytra elongata, modice depressa, postice attenuata, apice obliquiter bilunata, angulis suturalibus dentatis, externis breviter spinosis, punctis mediocribus inordinatim sat dense cribata, postice sublaevia, carinis lateralibus obtusis; pedes nigri, femorum basi, tiliarum annulo subbasali, sat lata, tarsorum art. 1^o, apice excepto, rufotestaceis, tarsis posticis elongatis, art. 1^o, 2^o et 3^o simul sumptis longiore, femoribus clavatis, posticis σ apicem elytrorum leniter superantibus, φ haud attingentibus; prosterni processus angustus, planus, retro dilatatus; mesosterni processus vix latior, planus; corpus subtus fusco-cinereo tomentosum.

Long. 5,5 — 6 mm. 5 ex.

Hab. Rep. Costa Rica: Hamburgfarm, Reventazon, Ebene Limon, F. Nevermann leg. Typo na collecção Nevermann, cotypo na collecção do autor.

Diese kleine Art erinnert an *A. callistus* Bates, unterscheidet sich von ihr leicht durch die anders geformte Spitze der Fluegeldecken.

Anisopodus nigrosarsus, n. sp.

Oblongus, depressus, postice angustatus, supra opacus, subtus nitidus, piceus, cinereo vel flavescens cinereo tomentosus, pronoto maculis rotundis duabus, transversim ordinatis, ante medium, elytris punctis minutis, lineatim ordinatis, densioribus juxta suturam et ad carinam lateralem, utrinque ad tertiam partem apicalem macula sat magna, obliqua, marginali nigris, epipleuris saepius cinereo-fuscis, antennis, scapo excepto, rufis, art. 3-11 apice picis; caput virescente-fusco-sericeo tomentosum, sub pube haud distincte punctatum, inter antennis vix concavum, fronte plana, transversa, longitudinaliter sulcata, oculis minute granulatis, valde incis, lobis superioribus modice distantibus, lobis inferioribus magnis, subquadratis, genis brevissimis; antennae elongatae, tenues, subtus setis raris breviter obsitae, scapo elongato, basim elytrorum attingente; thorax transversus, dense fusco-cinereo tomentosus, lateribus vix dilatato rotundatis, spinis minutis, acutis, retrorsum curvatis, ab angulis posticis modice distantibus, punctis minutissimis passim impressis; scutellum triangulare, apice late rotundatum, cinereo-fusco tomentosum; elytra modice elongata, depressa, postice attenuata, apice obliquiter breve bilunata, angulis suturalibus vix, externis breviter dentatis, inordinatim minute, epipleuris grossioribus, punctata, postice sublaevia, carinis lateralibus subacutis; pedes griseo tomentosi, femoribus basi testaceis, clavis plus minus infuscatis, posticis ♂ apicem elytrorum vix, ♀ haud attingentibus, tibiis nigris, juxta basim sat late testaceo vel rufo annulatis, tarsorum art. 1^o, apice nigro excepto, rufo-testaceo vel testaceo, art. 2-4 totis nigris, posticis modice elongatis, art. 1^o, 2^o et 3^o simul sumptis longiore; prosterni processus angustus, planus, retro dilatatus; mesosterni processus vix latior, etiam planus; corpus subtus dense cinereo tomentosum.

Long. 5,5 — 6,5 mm. 6 ex.

Hab. Estado de São Paulo: Capital, Villa Cerqueira Cesar, R. Muus leg. Amparo, Dr. P. Reck leg., Districto Federal. Guaratiba, Aristoteles Silva leg. Typo de Amparo na collecção Reck, cotypo nas collecções Silva e do autor.

In der Zeichnung steht diese Art *A. cognatus* Bates sehr nahe, sie unterscheidet sich von dieser durch die geringere Groesse, die ovalere Form, die bedeutend kuerzeren Beine etc.

Eutrichillus brasiliensis, n. sp.

Minutus, oblongo-ovatus, subconvexus, niger, cinereo variegatus, antennis fuscis vel nigris, art. 3-7 (8) basi pallide rufis, thorax guttis duabus, rotundatis in medio, transversim ordinatis, cinereo tomentosus, elytris nigris, setis nigris, longis et erectis, lineatim ordinatis hirtis, plaga

dorsali ante medium, saepius plus minus indistincta et nigro variegata, ad quintam partem posteriorem fascia sat lata, postice ad suturam continuata, cinereo tomentosus, carinis centrobasalibus vix elevatis, longe nigro penicillatis, femoribus fuscis vel nigris, medialis et posticis basi rufo-ferrugineis, tibialis nigris, medio rufo-ferrugineo annulatis, tarsis atris, posticis art. 1^o, apice excepto, rufo-testaceo; caput opacum, subtiliter flavescens-fusco tomentosum, sub pube haud distincte punctatum, inter antennis leniter concavum, fronte transversa, plana, longitudinaliter sulcata, oculis minute granulatis valde incisus, lobis superioribus distantibus, lobis inferioribus subrotundatis, genis elongatis, oculorum lobos inferiores aequalibus; antennae corpore sesquilingiores, villosae, subtus sat dense et longe cillatae, scapo elongato, prothoracis tertiam partem anteriorem attingente, art. 3 scapo leniter longiore, 4 praecedente manifeste brevior, caeteris gradatim decrecentibus; thorax opacus, niger, griseo parce tomentosus, supra aequalis, transversus, usque ad spinas laterales gradatim leniter amplatus, deinde attenuatus, spinis porrectis, acutis, ab angulis posticis modice distantibus, punctis minutis sat dense profundeque punctatus; scutellum transversum, apice rotundatum, dense nigro tomentosum; elytra thoracis basi latiora, apice modice declivia, lateraliter parallela, ante apicem arcuatim angustata, apice ipso singulatim rotundata, subopaca, sat grosse, profunde sublineatim punctata, punctis apicem versus obsoleteioribus; pedes mediocres, setis nigris undique sparsim hirti, femoribus valde clavatis, subtilissime cinereo tomentosus, tarsis posticis modice elongatis, art. 1^o, 2^o et 3^o simul sumptis longiore; prosterni processus intercoxalis angustissimus; mesosterni processus vix latior; corpus subtus cinereo tomentosum.

Long. 3-5 mm. 4 ex.

Hab. Rio Grande do Sul: Porto Alegre, Parecy Novo, P. P. Buck leg. Typo na collecção do autor, cotypo na collecção do Snr. Buck.

Diese eigentuemlich Art passt am besten in den angegebenen Genus. Der Basalkiel der Decken, der mit einem schwarzen Haarbusch versehen ist, die langen Borsten der Decken und die staerkere Bewimperung der verhaeltnismaessig kurzen Antennen sind ihm eigen. Ausserdem ist der Pro- und Mesosternalfortsatz gemass der Angaben von Bates. Andererseits ist die Koerperform gedrungenere und convexer.

Ozineus quadricristatus, n. sp.

Elongatus, postice angustatus, depressus, supra nitidus, subtus opacus, piceus, supra fusco-cinereo tomentosus, fusco (praesertim ad basim et apicem elytrorum), variegatus, pronoto maculis duabus, rotundatis, transversim ordinatis, ante medium nigro-fuscis, elytris in medio fascia sat lata, cinerea punctisque paucis, rotundatis et minutis, fuscis passim ornatis, antennis fuscis, apicem versus ferrugineis, pedibus fuscis, tibialis tarsisque posticis ferrugineis; caput virescente-fusco tomentosum, subtilissime punctulato-coriaceum, inter antennis concavum, fronte transversa, plana, longitudinaliter sulcata, oculis minute granulatis, valde incisus, lobis superioribus modice distantibus, lobis inferioribus magnis, quadratis, genis brevibus; antennae elongatae, tenues, dense virescente-fusco tomentosae, subtus basi setis raris breviter obsitae, scapo elongato, basim elytrorum haud attingente, art. 3 scapo longiore; thorax transversus, dense fusco-cinereo tomentosus,

lateribus vix dilatato-rotundatis, spinis minutis, acutis, retrorsum curvatis, ab angulis posticis modice distantibus, dorso punctis minutis passim irregulariterque cribratus; scutellum sat magnum, triangulare, apice rotundatum, fusco tomentosum; elytra elongata, depressa, postice attenuata, apice obliquiter bilunata, angulis suturalibus vix productis, externis dentatis, carinis centrobasalibus fuscis, elevatis, leniter elongatis, breviter nigro penicillatis, carinis lateralibus acutis, paulo pone medium ad marginem posticam fasciae cinereae juxta suturam utrinque crista transversa, modice elongata, nigro breviter penicillata munita, punctis minutis sublineatim ordinatis profunde impressa; femora clavata, postica o elongata, apicem elytrorum vix superantia; tibiae anticae intus tuberculatae; tarsi postici elongati, art. 1^o, 2^o et 3^o simul sumptis duplo longiore; prosterni processus modice latus, subplanus; mesosterni processus vix latior, planus; corpus subtus clare fusco-cinereo tomentosum.

Long. 8 mm. 2 ex.

Hab. Estado de Santa Catharina: Hansa-Humboldt, A. Maller leg. Typo na collecção do autor, cotypo na collecção do Snr. Maller.

Unterscheidet sich von allen bekannten Arten durch den hinter der Mitte auf jeder Decke sich findenden Kiel.

In Faerbung erinnert die neue Art an *A. rotundicollis* Bates, unterscheidet sich aber ausser durch oben angeführtes Merkmal durch das seitlich weniger gerundete Halsschild, durch die bedeutend grösseren und hoeheren Kiele in der Mitte der Basis der Decken etc.

Ozinus Zikani, n. sp.

Oblongus, modice depressus, postice angustatus, opacus, piceus, dense virescente-cinereo tomentosus, cinereo et virescente-fusco passim variegatus, vertice maculis duabus, thorace vittis duabus dorsalibus, antice posticeque abbreviatis, virescente-fuscis, elytris in medio fascia lata, obliqua, indistincta, clare virescente-cinerea, sutura utrinque lineis tribus, leniter elevatis, fusco cinereoque variegatis decoratis, 1^a. juxta suturam, antice posticeque valde abbreviata, 2^a. dorsali, obliqua, ante apicem terminata, 3^a. ad carinam lateralem; caput virescente-cinereum, vertice pallidiore, tomentosum, subpube haud distincte punctatum, inter antennis concavum, fronte transversa, plana, longitudinaliter sulcata, oculis minute granulatis, valde incisis, lobis superioribus distantibus, lobis inferioribus subtransversis, genis medio-cribibus, oculorum lobos inferiores subaequalibus; antennae elongatae, tenues, subtus laxe ciliatae, art. 3-11 basi ferrugineo-rufis, apicem versus fuscis, scapo elongato, dense virescente-cinereo tomentoso, art. 3 scapo brevior; thorax transversus, lateribus vix dilatato-rotundatis, spinis minutis, acutis, retrorsum curvatis, ab angulis posticis modice distantibus, dorso punctis minutis, paucis passim cribratus; scutellum triangulare, apice rotundatum, dense virescente-cinereo tomentosum; elytra elongata, modice depressa, postice attenuata, apice obliquiter bilunata, angulis suturalibus vix productis, externis dentatis, carinis centrobasalibus elevatis, modice elongatis, nigro penicillatis, carinis lateralibus acutis, punctis minutis, lineatim ordinatis, impressa; femora valde clavata, virescente-cinereo tomentosa, postica o elongata, apicem elytrorum vix superantia; tibiae nigro-fuscae, cinereo annulatae, anticis intus medio haud tuberculatis; tarsi picei, posticis art. 1^o pallidiore, his modice elongato, 2^o et 3^o simul sumptis vix longiore; prosterni

processus angustus, subplanus; mesosterni processus vix latior, planus; corpus subtus dense virescente-cinereo tomentosum.

Long, 5,5 mm. 1 ex.

Hab. Estado do Rio de Janeiro: Itatiaya, 700 m., J. F. Zikán leg. Typo na collecção do autor.

Durch die drei, etwas erhabenen Punktreihen auf jeder. Decke, die ziemlich regelmaessig dunkelbraun und weissgrau variieren, leicht kenntlich.

Ozineus bicristatus, n. sp.

Oblongus, modice depressus, postice angustatus, opacus, piceus, elytris pallidioribus, dense cinereo tomentosus, elytris carinis centro-basalibus, punctis rotundatis, lineatim ordinatis, cinereo plus minus marginatis, densioribus ad suturam et ad carinam lateralem, pone medium utrinque macula rotundata, dorsali, ad carinam lateralem, atris ornatis; caput fusco-cinereo tomentosum, sub pube haud distincte punctatum, inter antennis concavum, fronte transversa, plana, longitudinaliter, sulcata, oculis minute granulatis, valde incisus, lobis superioribus distantibus, lobis inferioribus subtransversis, genis mediocribus, oculorum lobos inferiores subaequalibus; antennae elongatae, tenues, subtus setis raris breviter obsitae, piceae, art. 4-7 basi ferrugineo-rufis, scapo elongato, dense fusco-cinereo tomentoso, art. 3 scapo leniter longiore; thorax transversus, dense cinereo tomentosus, lateribus haud dilatato-rotundatis, spinis minutissimis, acutis, ab angulis posticis modice distantibus, dorso punctis minutis passim irregulariterque impressus; scutellum sat magnum, triangulare, apice rotundatum, cinereo tomentosum; elytra elongata, modice depressa, postice attenuata, apice obliquiter bilunata, angulis suturalibus vix productis, externis dentatis, carinis centrobasalibus modice elongatis, elevatis, nigro penicillatis, carinis lateralibus subacutis, sublineatim discrete et minute punctata; femora valde clavata, postica $\bar{\nu}$ abdominis segmentum quartum vix superantia, fusco-cinereo tomentosa; tibiae nigrae, anticis intus medio haud tuberculatis; prosterni processus angustus, retro modice dilatatus, subplanus; mesosterni processus duplo latior, planus; corpus subtus dense fusco-cinereo tomentosum.

Long. 5,5 mm. 1 ex.

Hab. Estado de Minas Geraes: Passa Quatro, Fazenda dos Campos, 1.500 ms., J. F. Zikán leg. Typo na collecção do autor.

Steht *O. Zikani* nahe, unterscheidet sich durch die Zeichnung des Halsschildes und der Decken.

Ozineus dorsalis, n. sp.

O. arietino affinis. Elongatus, postice modice angustatus, depressus, testaceo-rufus, subtiliter cinereo tomentosus, thorace dorsali macula fusca, plus minus indistincta ornato, elytris plaga angusta, suturali, nigro-fusca, a basi ultra medium extensa, apice rotundata ibique et ad basim cinereo-tomentoso marginata, paulo pone medium fascia angusta, minus distincta, ad quintam partem posteriorem fascia communi, latiora, recta, marginem haud attingente apiceque dense cinereo-tomentosis ornatis; caput opacum, cinereo-tomentosum, sub pube haud distincte punctatum, inter antennis concavum, fronte subquadrata, plana, longitudinaliter sulcata, oculis minute

granulatis, valde incisis, lobis superioribus modice distantibus, lobis inferioribus magnis, quadratis, genis brevibus; antennae elongatae, tenues, subtus basi setis raris breviter obsitae, scapo saturate testaceo-rufo, art. 2-11 pallide rufo-testaceis, scapo elongato, basim elytrorum haud attingente, subtilissime punctulato-coriaceo, cinereo villosa, art. 3 scapo aequilongus; thorax transversus, subopacus, cinereo tomentosus, utrinque lateraliter plaga oblonga, dense punctulata, ditutiora, usque ad spinas laterales arcuatim leniter ampliatus, deinde attenuatus, spinis minutis, acutis, retrorsum curvatis, ab angulis posticis modice distantibus, dorso et ad basim punctis minutis passim irregulariterque cribatus; scutellum magnum, triangulare, apice late rotundatum, subtilissime cinereo tomentosum; elytra subnitida, modice depressa, postice rotundato-attenuata, apice obliquiter bilunata, angulis suturalibus haud productis, externis spinosis, carinis centrobasalibus minutis, brevissime nigro penicillatis, carinis lateralibus nullis, sublineatim sat dense punctata, postice laevia; femora clavata, postica elongata, ♀ apicem elytrorum haud attingentia; tarsi postici elongati, art. 1^o, 2^o et 3^o simul sumptis longiore; prosterni processus angustus, subplanus; mesosterni processus latior, planus; corpus subtus nitidum sat dense cinereo tomentosum, ♀ stylo vix elongato, segmento ultimo dorsali rotundato, ventrali truncato.

Long. 7 mm. 1 ex.

Hab. Rep. Costa Rica: Turrialba, 800 m., P. Schild leg. Typo na collecção do Snr. Nevermann.

Diese Art erinnert sehr an *O. arietinus* Bates, unterscheidet sich aber durch den grossen, dunklen Suturfleck der Decken etc.

Lepturges humilis, n. sp.

Oblongus, depressus, brunneo-niger, cinereo tomentosus, thorace vittis duabus vel maculis quatuor, gutta minuta utrinque juxta spinam lateralem et ad marginem posticam fascia angusta, in medio interrupta, brunneo-nigris ornato, scutello brunneo-nigro, apice cinereo tomentoso, elytris cinereo tomentosus, guttis numerosis, saepe confluentibus, lineatim ordinatis, juxta basim atque pone medium fasciis valde irregularibus formantibus, brunneo-nigris, antennis (art. 1-2 (3) exceptis) ferrugineis, art. 4 (3) — 11 apice picis, femoribus picis, tibiis nigris, ferrugineo annulatis, tarsis picis, posticis art. 1^o ferrugineo, apice nigro; caput cinereo-fusco tomentosum, sub pube haud distincte punctatum, inter antennis valde concavum, fronte transversa, plana, longitudinaliter sulcata, genis subbrevis, oculis minute granulatis, profunde incisis, lobis superioribus modice distantibus, lobis inferioribus subquadratis; antennae tenues, corpore duplo longiores, setis raris breviter obsitae; thorax transversus, modice convexus, usque ad spinas laterales gradatim ampliatus, deinde valde attenuatus, spinis acutis, retrorsum curvatis, ab angulis posticis modice distantibus, sub pube haud distincte punctatus; scutellum transversum, apice rotundatum; elytra oblonga, depressa, postice attenuata, apice ipso obliquiter truncato in singulis, angulis externis dentato-productis, suturalibus rotundatis, dense, minute, sublineatim punctata, postice sublaevia; femora quatuor antica clavata, postica gradatim incrassata, his illis longioribus, abdominis segmentum quartum superantia; tarsi postici elongati, art. 1^o, 2^o et 3^o simul sumptis longiore; prosterni processus intercoxalis angustissimus; mesosterni processus vix latior; corpus subtus fusco-cinereo tomentosum.

Long. 5 — 5,25 mm. 2 ex.

Hab. Estado de São Paulo: Capital, Parque do Estado, colleccionado pelo autor, Alto da Serra, Dr. F. Ohaus leg. Typo na colleção do autor.

Diese Art duerfte dem mir nur durch die Beschreibung bekannten *L. delicatus* Bates aehnlich sein. Letzterer ist vom oberen Amazonas bekannt. Die Faerbung, auch die der Unterseite, ist in dessen verschieden.

Lepturges franciscanus, n. sp.

Oblongo-ovatus, modice depressus, subtus testaceo-rufus, supra piceus, cinereo vel flavesciente-cinereo tomentosus, fusco vel nigro variegatus, thorace, maculis 4 dorsalibus, quarum 2 maioribus, subquadratis ad marginem anticam 2 ante medium, minoribus, saepius plus minus indistinctis et punctis paucis, minutis, passim interspersis, nigris ornato, scutello dense cinereo tomentoso, elytris sat dense cinereo vel flavesciente-cinereo tomentosis, nigro passim et sublineatim punctatis, punctis juxta suturam densioribus, et maculis plurimis, etiam nigris vel fuscis ornatis, scilicet: 1^a. sat magna, circumscutellari irregulari, 1^a, humerali, saepius plus minus indistincta, utrinque vitta irregulari, sublaterali, ad quartam partem anteriorem incipiente, pone medium intus dilatata, ibique fasciam simulante, ad sextam partem posteriorem terminata, in medio guttam clare cineream includente et paulo ante apicem macula triangulari, nec suturam, nec marginem attingente, antennis, art. 1-2 exceptis, rufo-ferrugineis, art. 3-11 apice fuscis, pedibus piceis, coxis anticis et mediis, femorum basi, tiliarum annulo ante medium rufo-testaceis, tarsis nigris, art. 1^o ad basim saepe rufo-testaceo; caput fusco-cinereo tomentosum, subtilissime punctulato-coriaceum, inter antennis valde concavum, fronte transversa, plana, longitudinaliter sulcata, genis mediocribus, oculis minute granulatis, profunde incisus, lobis superioribus fere contiguis, lobis inferioribus sat magnis, rotundatis; antennae elongatae, tenues, setis raris breviter obsitae, scapo elongato, basim elytrorum vix attingente; thorax transversus, convexus, usque ad spinas laterales gradatim leniter ampliatus, deinde valde attenuatus, spinis acutis, retrorsum curvatis, ab angulis posticis modice distantibus, punctis minutis sat dense cribratus; scutellum triangulare, apice rotundatum; elytra oblonga, subdepressa, postice attenuata, apice ipso obliquiter truncato in singulis, angulis rotundatis, dense mediocriter inordinatim punctata, postice laevia; femora quatuor antica clavata, postica gradatim incrassata, his illis longioribus, abdominis segmentum quartum superantia; tarsi postici modice elongati, art. 1^o, 2^o et 3^o simul sumptis vix longiore; prosterni processus intercoxalis angustissimus; mesosterni processus vix latior; corpus subtus cinereo tomentosum.

Long. 5 — 6 mm. 11 ex.

Hab. Estado de São Paulo: Capital, Parque Jabaquara, colleccionado pelo autor; Estado do Rio Grande do Sul: Porto Alegre, S. Leopoldo, P. P. Buck leg. Typo de São Paulo na colleção do autor, cotypo na colleção do Snr. Buck.

Diese Art erinnert an *L. delicatus* Bates und *L. musculus* Bates, ist aber durch die Zeichnung leicht erkenntlich. Ich benenne sie zu Ehren der in Brasilien taetigen Geistlichen vom Ordem

S. Francisco, die schon ausserordentliches zur Kenntnis der brasilianischen Fauna beigetragen haben und denen auch ich fuer ihre uneigennuetzige Mitarbeit durch Lieferung von Material sehr verbunden bin.

Sporetus abstrusus, n. sp.

Oblongus, opacus, niger, flavescens-cinereo tomentosus, setis nigris semierectis in elytris, lineatim ordinatis interspersis, capite dense flavescens-cinereo tomentoso, tuberculis antenniferis intus, vertice vittis duabus, inter se sat distantibus, atro tomentosus, capite subtus nudo, atro, nitidissime, thorace flavescens-cinereo tomentoso, dorso vittis duabus, ad dimidiam partem apicalem angustioribus et intus leniter concavis, ibique lineam angustam ad medium curvatim directa et ad apicem continuata emittente, utrinque vitta sublaterali, postice abbreviata, marginem anticam vix attingente tuberculisque lateralibus nigro-tomentosis, scutello cinereo tomentoso, nigro marginato, elytris nigro irregulariter maculatis fasciisque tribus valde angulatis etiam nigris ornatis, 1^a. ante medium, 2^a. pone medium, suturam vix attingente, extus ampliata, 3^a. paulo ante apicem, suturam haud attingente, extus ampliata, antennis atris, scapo, apice excepto, flavescens cinereo tomentoso, art. 3-11 basi niveo annulatis; caput inter antennis leniter concavum, sub pube haud distincte punctatum, fronte plana, subquadrata, longitudinaliter sulcata, vertice convexo, sulcato, oculis minute granulatis, valde incisus, lobis superioribus distantibus, lobis inferioribus subquadratis, genis oculorum lobos inferiores aequalibus; antennae corpore plus sesqui longiores, setis raris nigris supra et subtus obsitae, scapo elongato, basim elytrorum haud attingente; thorax latitudine brevior, convexus, supra aequalis, usque ad spinas laterales gradatim amplius, delinde attenuatus, spinis minutis, ab angulis posticis modice distantibus, sub pube haud distincte punctatus; scutellum triangulare, apice rotundatum; elytra elongata, modice convexa, postice attenuata, apice ipso obliquiter truncato in singulis, angulis suturalibus rotundatis, externis angulatis, punctis mediocribus passim inordinatim impressa, postice laevia; pedes mediocres, femoribus clavatis, posticis longioribus, abdominis segmentum quartum vix superantibus, dense flavescens-cinereo tomentosus, paulo ante apicem nigro annulatis, tarsis nigris, art. 1-2, apice excepto, cinereo tomentosus, posticis modice elongatis, art. 1^o, 2^o et 3^o simul sumptis brevioribus; prosterni processus angustus, retro arcuatus et dilatatus; mesosterni processus latus, subplanus; corpus subtus dense flavescens-cinereo tomentosum.

♀ stylo modice elongato, segmento ultimo dorsali attenuato, acuto, ventrali truncato.

Hab. Estado de Santa Catharina: Mafra, A. Maller leg. Typo na collecção do autor, cotypo na collecção Maller.

In der Zeichnung der Decken und des Thorax erinnert diese Art etwas an *Eutrypanus tessellatus* White, unterscheidet sich aber sofort durch die Borsten auf den Decken.

Eutrypanus dignus, n. sp.

Elongatus, piceus, fusco tomentosus, flavescens variegatus plagisque albis decoratus, setis in elytris, lineatim ordinatis interspersis; caput inter antennis concavum, fronte fusco-cinereo tomentosa, subplana, quadrata,

longitudinaliter sulcata, vertice convexo, sulcato, maculis duabus convergentibus flavido tomentosus decorato, oculis minute granulatis, valde incis, lobis superioribus approximatis, lobis inferioribus magnis, subquadratis, genis mediocribus; antennae elongatae, setis raris breviter obsitae, fusco tomentosae, art. 3-10 basi cinereo annulatis, scapo cinereo fusco, apice fusco tomentoso, elongato, basim elytrorum attingente; thorax transversus, convexus, aequalis, usque ad spinas laterales ampliat, deinde attenuatus, spinis obtisis, ab angulis posticis modice distantibus, dorso dense albo tomentosus, plaga magna, cuneata in medio, marginem anticam haud attingente, margine basali, punctisque rotundatis paucis fusco tomentosus, quorum 6 maioribus, scilicet: 4 juxta marginem anticam, 2 subbasalibus, subtus cinereo-fusco tomentosus, sub pube haud distincte punctatus, sulco basali punctis paucis mediocribus fuscis impressus; scutellum triangulare, apice rotundatum, longitudinaliter sulcatum, fusco tomentosum elytra basi thorace latiora, postice attenuata, apice ipso breviter oblique truncato in singulis, angulis haud productis, carinis lateralibus nullis, fusco-subsericeo tomentosa, flavido sat dense variegata, plaga magna, irregulari, communi in medio, plus minus litteram X simulante, et paulo ante apicem fascia modice lata, antice posticeque angulata apiceque, punctis paucis, fuscis, inordinatim ordinatis, includentibus, cinereo tomentosus ornata, ad basim sat dense irregulariter punctata, postice laevia, pedes mediocres, femoribus valde clavatis, cinereo tomentosus, tibiis fuscis, cinereo annulatis, tarsis fuscis, art. 1-2 dense cinereo tomentosus, posticis elongatis, art. 1^o, 2^o et 3^o simul sumptis longiore; prosterni processus angustus, arcuatus retro dilatatus; mesosterni processus latissimus, subplanus metasternum in medio cinereo-fusco-sericeo, lateraliter cinereo tomentosum; abdomen cinereo tomentosum.

♂ segmento ultimo centrali emarginato et breviter bispinoso, dorsali sinuato-truncato, antennis corpore plus sesqui longioribus, tarsis anticis tumidis.

♀ stylo modice elongato, segmento ultimo dorsali rotundato, ventrali emarginato, tarsis simplicibus.

Long. 12 — 13,5 mm. 3 ex.

Hab. Estado de Minas Geraes: Mar de Hespanha, Rio José Pedro; Estado do Espirito Santo: Rio Itapemirim, J. F. Zikán leg. Typo de Mar de Hespanha na collecção do autor, cotypo na collecção Zikán.

Eine durch die Faerbung des Halsschildes und der Decken leicht kenntliche Art.

Eutrypanus sobrinus, n. sp.

Elongatus, piceus, pube virescente-cinerea vestitus, cinereo passim variegatus, setis nigris, semirectis in elytris lineatim ordinatis interspersis, thorace maculis vel vittis plus minus indistinctis, quarum duabus nitidioribus utrinque juxta spinas laterales olivaceas, elytris virescente-cinereo tomentosus, dorso cinereo passim variegatus, ad quartam partem posteriorem juxta suturam utrinque macula oblonga, nigra, antice cinereo marginata, paulo ante, apicem punctis irregularibus, saepe plus minus indistinctis, transversim ordinatis, fasciam simulantibus, cinereis vel flavescens cinereis, tibiis nigris, cinereo annulatis, tarsis nigris art. 1-2 cinereo tomentosus, art. 4 ferrugineo, antennis piceis, art. 3-11 basi cinereo annulatis; caput inter

antennas valde concavum, fronte subplana, quadrata, longitudinaliter, sulcata, vertice convexo, sulcato, sub pube haud distincte punctatum, oculis minute granulatis, valde incisis, lobis superioribus modice distantibus, lobis inferioribus subquadratis, genis oculorum lobos inferiores subaequalibus; antennae corpore longiores, subtus setis raris breviter obsitae, scapo elongato, basim elytrorum attingente; thorax transversus, convexus, aequalis, usque ad spinas laterales ampliatus, deinde attenuatus, spinis sat robustis, acutis, retrorsum curvatis, ab angulis posticis modice distantibus, sub pube haud distincte punctatus, sulco basali punctis mediocribus lineatim impressus; scutellum triangulare apice rotundatum, nigro-fusco subtiliter tomentosum; elytra elongata, basi thorace latiora, lateraliter subito decliva, postice gradatim attenuata, apice ipso late sinuato-truncato in singulis, angulis suturalibus vix productis, externis obtuse dentatis, carinis lateralibus acutis, ante apicem evanescentibus, dorso modice deplanata, haud inaequalia, punctis minutis passim profundeque cribata, postice sublaevia; pedes mediocres, femoribus clavatis, tarsis posticis elongatis, art. 1^o, 2^o et 3^o simul sumptis longiore; prosterni processus angustus, postice arcuatus et dilatatus; mesosterni processus triplo latior, subplanus; corpus subtus dense virescente-cinereo tomentosum.

♂ segmento ultimo ventrali rotundato, dorsali truncato, antennis corpore plus duplo longioribus, tarsis anticis vix tumidis.

♀ stylo elongato, segmento ultimo dorsali attenuato et rotundato, ventrali valde emarginato et longissime bispinoso.

Long. 8 — 10 mm. 3 ex.

Hab. Estado de Santa Catharina: Hansa-Humboldt, A. Maller leg. Typo na collecção do autor, cotypo na collecção Maller.

Diese Art duerfte dem mir leider nur durch die Beschreibung bekannten *E. signaticornis* Cast. aehnlich sein. Die Faerbung des Halsschildes und der Decken ist aber verschieden.

ORCHIDACEÆ NOVÆ BRASILIENSIS I. *

por

P. CAMPOS PORTO & A. C. BRADE

(Com 4 estampas)

1. *Epidendrum magdalenense* C. Porto & Brade n. sp. (Estampa 3, fig. 28-33).

Planta rupicola erecta; caulibus pluribus fasciculatis robustis, circiter 25 cm. altis, valde compressis, dense multifoliatis; foliis coriaceis, erectis, distichis imbricatis, glauco-viridis, 4-6 cm. longis, 3-3.5 cm. latis, oblongis, acutiusculis, carinatis, basi articulatis et vaginantibus, vaginis amplexicaulibus, utrinque carinatis; floribus mediocris, carnosulis, fasciculatis, pedicellatis, foliis brevioribus, virescentibus, purpureo-maculatis; ovario antice vesicato, cum pedicello 4 cm. longo; sepalis carnosulis aequilongis 11-12 mm. longis, 7 mm. latis, distincte 4-5 nerviis; petalis ovato-lanceolatis, acuminatis, sepalis subaequilongis, 11 mm. longis, 4 mm. latis; labello carnosulo, indiviso obtuse-quadrangulo, basi leviter subcordato, apice brevissime-acuminato, ceterum margine integerrimo, reflexo, 7 mm. longo, 10 mm. lato, basi bicalloso; columna breviuscule, crassa.

Habitat: Brasilia. Estado do Rio de Janeiro, Sta. Maria Magdalena, Pedra Dubois 1.100 m. s.n.m. Leg. Santos Lima & Brade 9-3-1935. Exemplar typo Herbario Jardim Botânico Rio de Janeiro N.º 26.629.

Distingue-se de *Epidendrum vesicatum* Lindl, que é a especie proxima, já á primeira vista pelo habito diferente, pelo lugar da habitação, como tambem pelas flores mais carnosas e de côr diferente, labello mais largo do que comprido e a columna mais grossa na base.

Diese Art, die sich durch Standort und Habitus schon von dem nahestehenden *E. vesicatum* Lindl. unterscheidet, ist auch durch die fleischigen, anders gefärbten Blüten, mit anders geformter

(*) — Entregue em 15 de Outubro de 1935.

Lippe, die bedeutend breiter als lang ist, und die, am Grunde breitere, Säule gut von letzterer Art geschieden.

2. *Constantia cipoensis* C. Porto & Brade n. sp. (Estampa 1. fig. 1-10).

(*Sophronitis* c. Sect. II *Constantia*).

Rhizoma breviter repens, radicibus robustiusculis, canescentibus; pseudobulbis minutis, subglobosis, vel paulo compressis, basi uniarticulatis, primum vaginis membranaceis vestitis, demum denudatis, sublaevibus, aproximatis, apice diphyllis; foliis minutis carnosis, patentissimis, ovato-suborbicularibus, apice acutis, basi subtruncatis vel subcordatis, glaucis, 6-8 mm. longis, 5-7 mm. latis, nervo mediano supra leviter canaliculato, subtus paulo prominente, nervulis lateralibus 3-5 utrinque, paulo prominulis; pedunculo gracillimo, brevissimo, solitario, unifloro, bracteis 1-2 acutis, vaginiformibus tecto; floribus, pro portione, majusculis, albis, segmentis submembranaceis, erecte-patulis; sepalis subaequilongis, ovato-oblongis, acutiusculis, apice obtusiusculis, lateralibus paulo obliquis, circiter 10 mm. longis, 5-6 mm. latis; petalis ovato-lanceolatis, acutiusculis, sepalis subaequilongis, 10 mm. longis, 4 mm. latis; labello subcarnosulo, sepalis subaequilongo, basi cum columna brevissime connato, indiviso, erecto, apice vix recurvato, linguiforme-oblongo, acuminato, apice acuto, circiter 10 mm. longo, 4,5 mm. lato, disco ad medium carnosulo trilamellato, luteo; columna crassa, erecta subclaviforme, apice bilobata, postice minute unidentata, 4 mm. longa, 3 mm. lata.

Habitat: Brasilia. Estado de Minas Geraes, Serra do Cipó. 1.400 m.s.n.m. epiphytica ad Velloziaceae. leg. Mello Barreto & Brade N.º 14.386. 16-4-1935. — Exemplar typo Herbario Jardim Botânico Rio de Janeiro. N.º 26.625.

Seguindo a iniciação de Schlechter (Fedde Repert, Beih. 35, p. 77) separamos novamente o genero *Constantia* Barb. Rodr. de *Sophronitis*. As 3 especies descriptas até hoje (*C. rupestris* B. Rodr. *C. australis* (Cog.) Porto & Brade e *C. cipoensis* Porto & Brade) têm pseudobulbos bifoliados e flores alvescentes com petalas mais estreitas do que as sepalas. A respeito do labello de *C. rupestris* que Barbosa Rodrigues (Gen. et Spec. Orch. Nov. I p. 79) indica como sendo connexo á columna até ao meio, observamos em flores de exemplares da Serra do Itatiaia que a conexão é muito pequena e sómente na base (estampa 3 fig. 6), como mostra tambem a figura na Fl. Bras. III 5 t. 70 fig. 2).

Tal engano foi provavelmente causado pela analyse de flores anormaes, que não são raras nesta especie. Exemplares, colhidos perto do Jardim Botânico, por exemplo, produzem exclusivamente flores cleistopetalas, com columna tubulosa e 3 petalas quasi iguaes (estampa 3, fig. 9-10).

Como differença principal de *Sophronitis* B. Rodrigues (l. c. p. 78) não indica a ligação forte do labello com a columna.

A nova especie distingue-se logo, a um primeiro exame, de *C. rupestris* pela côr glauca das folhas e pelas nervuras destas, que são bem distinctas.

Der Anregung Schlechter's folgend haben wir die Gattung *Constantia* Barb. Rodr. wieder von *Sophronitis* abgetrennt. Ausser den 2-blättrigen Pseudobulben, besitzen die bisher bekannten 3 Arten (*C. rupestris* B. R. — *C. australis* (Cogn.) Porto & Brade, und *C. cipoensis* Porto & Brade) weissliche Blüten, deren Petalen schmaler als die Sepalen sind. Betreffs der Verwachsung der Lippe mit der Säule ist zu bemerken, dass Barbosa Rodrigues in seiner Diagnose von *Constantia rupestris* (Gen & Spec. Orch. Nov. I. 78. 1878) diese, irrtümlicher Weise, als bis zur Mitte der Säule reichend angibt. Es stimmt dies schon nicht mit der Figur Fl. Bras. III. 5 t. 70 fig. 2 überein.

Zur besseren Kenntnis der Art geben wir die Analysis einer Blüte von *C. rupestris*, die von der Serra do Itatiaya stammt. (Estampa 3 fig. 1-8). Fig. 6 zeigt, dass die Lippe nur sehr kurz an der Basis mit der Säule zusammenhängt.

Vielleicht lag dieser irrtümlichen Angabe eine anomale Blüte zu Grunde, wie wir solche ausschliesslich an Pflanzen beobachteten, die aus der Nähe des Botanischen Gartens stammen (t. 3 fig. 9-10), diese bleiben immer geschlossen, die Lippe ist kaum von den Petalen verschieden und die Säule bildet eine geschlossene Röhre. Als Hauptunterschied von *Sophronitis* gibt B. Rodrigues auch nicht die stärkere Verwachsung der Lippe an, sondern den Gesamtaufbau der Pflanze und Form der Pollinien.

Die neue Art unterscheidet sich von *C. rupestris* sofort durch die blaugrüne Farbe der Blätter und die sichtbare Aderung derselben.

Pseudolaelia C. Porto & Brade nov. gen.

Laelinae-Cattleyeae octopolliniata.

Sepala libera, patentia, subaequalia. Petala sepalis aequalia, non undulata. Labellum basi cum columna in tubum connatum, distincte trilobatum; lobi laterales ligulati; lobus terminalis patens ovatus, leviter lamellatus. Columna erecta, crassa, claviforme, bilobata; pollinia 8, in quoque loculo 4; ovarium pedicellatum, cylindraceum, glabrum.

Herbae epiphyticae, Brasilia incolae. Pseudobulbis, vel caulibus, carnis, oblongis fusiformibus vel elongatis, plurivaginatibus, apicem versus 3-5 foliatis; folia coriacea, lineare lanceolata; pedunculi terminales, plurivaginati; racemus simplex raro pauciramulus, floribus speciosis.

3. ***Pseudolaelia corcovadensis* C. Porto & Brade, n. sp.** (Estampa 1. fig. 11-19 & estampa 2).

Epiphytica, erecta 50-70 cm. alta; rhizomate repente, flexuoso rigido 3-4 mm. crassa, radicibus filiformibus; pseudobulbis circiter 5 cm. inter se distantibus, fusiformis 5 cm. altis, 1-2 cm. crassis, apicem versus 3-5 foliatis, foliis erectis lineari-ligulatis, acutis, apice oblique-obtusiusculis, basin versus vix angustatis, 16-22 cm. longis, 7-11 mm. latis, coriaceis, 5-7 nerviis, margine

tenuissime membranacea verrucoso-crenulata; costa subtus, nervis utrinque prominulis; pedunculo stricto, circiter 50 cm. alto, vaginis numerosis, scariosis, acuminatis tecto, apice laxiusculo 10-15 floro, raro paniculato; floribus majusculis roseo-purpurascensibus, succedaneis, pedicellatis, bracteis triangularis, acuminatis, 1-3 mm. longis; sepalis membranaceis, subaequilongis, oblongis, 7-9 nerviis, 18 mm. longis, dorsalia 6 mm. lata, lateralibus 8 mm. latis; petalis oblongis, acutis, planiusculis, sepalis paulo longioribus; labello membranaceo, sepalis subaequilongo, basi columae longiusculo annexo, profunde trilobato, lobis lateralibus ligulatis, apice obtusis, margine integerrimis, 5 mm. longis, 2 mm. latis, terminali multo longiore et latiore, late ovato vel subrotundato, circiter 10-12 mm. longo et lato, basi attenuato, apice distincte emarginato, margine leviter crenulato, venis principalibus elevatis, cristatis, flavescensibus; columna crassiuscula, erecta, claviforme, bilobata, 6 mm. longa; ovario pedicellato, glabro, cum pedicello 2 cm. longo; capsula elliptico-ovoidea, apice longiusculo rostrata.

Habitat: Brasilia, Rio de Janeiro, Corcovado 500 m. s. n. m. epiphytica ad Velloziaceae. — Exemplar typo Herbario Jardim Botânico N.º 26.626. leg. Voll & Carriz 20-6-1935.

A especie presente é por nós conhecida ha varios annos, em seu habitat e de exemplares cultivados no Jardim Botânico.

Tentamos sem resultado identifiçal-a com uma das especies já descriptas, parecendo-nos quasi impossivel que uma planta tão singular e vivendo nas proximidades (Corcovado) da capital do paiz, não tenha chamado a attenção de tantos colleccionadores que visitaram esta região.

Ha pouco tempo o Dr. F. C. Hoehne publicou no Boletim de Agricultura de São Paulo 1933, a descripção de uma Orchidacea sob o nome *Schomburgkia vellozicola*, que muito se approximando da nossa especie, levou-nos a não hesitar mais na publicação desta.

Deliberamos não seguir o exemplo de Hoehne, e deixamos de incluil-a no genero *Schomburgkia* visto a forma da flor tal não permittir. Doutro lado não foi possivel alinhá-a num dos outros generos das Laeliinae, tendo sido indispensavel crear um genero novo. Para mostrar as relações deste novo genero com generos proximos, damos em seguida um resumo dos generos proximos no qual, conforme o trabalho de Schlechter (Fedde Rep. Beih. Bd. XXXV p. 76) o genero *Sophronitis* foi dividido nos generos *Sophronitis*, *Eunannos*, *Sophronitella* e *Constantia*.

Como mostra a chave, o novo genero aproxima-se, pela forma da columna, mais do grupo de *Sophronitis* do que *Laelia-Schomburgkia*. Além disso o labello, apesar da junção com a columna, differe bem do typo de *Schomburgkia*.

No habito a *Pseudolaelia* lembra um pouco a *Schomburgkia*, mas a inflorescencia já é bem differente. Hoehne indica a inflorescencia de *Schomburgkia vellozicola* como sendo subumbellata com 2-8 flores, mas como mostra a figura as flores abrem-se sucessivamente, permittindo ver flores abertas e botões de diversos tama-

nhos na mesma inflorescencia, ao contrario de *Schomburgkia* na qual, em regra, todas as flores abrem-se contemporaneamente.

Embora não tenhamos visto material de *Schomburgkia vellozicola*, podemos sem duvida incluir esta especie no nosso genero como *Pseudolaelia vellozicola* (Hoehne) C. Porto & Brade.

Da nossa especie typica distingue-se facilmente pelas petalas estreitas liguliformes, e pelas lacineas lateraes do labello, que são mais agudas.

Die vorliegende Art ist uns seit vielen Jahren von dem oben angegebenen Standorte bekannt und im Botanischem Garten in Kultur. Vergeblich bemühten wir uns, dieselbe mit einer der bekannten Orchideenarten zu identifizieren, andererseits schien es fast unwahrscheinlich, dass eine so auffällige Pflanze, hier in unmittelbarer Nähe der Stadt, von allen Sammlern übersehen worden sein sollte.

Vor kurzer Zeit publizierte nun F. C. Hoehne, im Boletim de Agricultura, São Paulo 1933, eine Orchidacee, die unserer Pflanze nahe steht, dies veranlasste uns, mit der Bekanntgebung unserer Art nicht mehr zu zögern. Wir konnten uns nicht entschliessen, dem Vorgange Hoehne's zu folgen und dieselbe zum Genus *Schomburgkia* zu stellen, der Blütenbau ist doch zu verschieden. Auch sonst fügte sie sich in keine der bekannten Gattungen der *Laeliinae* weshalb wir gezwungen waren eine neue Gattung aufzustellen.

Folgend geben wir eine Uebersicht der nahestehenden Gattungen der *Laeliinae-Cattleyeae* mit 8 Pollinien, wobei wir den Angaben Schlechter's folgend (Fedde Repert. Beih. XXXV p. 76) die Gattung *Sophronitis* aufteilen.

Wie aus dem Schlüssel ersichtlich, steht die neue Gattung, durch die Form der Säule, der *Sophronitis-Gruppe* näher als *Laelia-Schomburgkia*. Aber auch das Labellum ist, abgesehen von der Verwachsung, erheblich anders gestaltet als bei *Schomburgkia*. Der Gesamthabitus der Pflanze erinnert an *Schomburgkia*, doch unterscheidet sich der Blütenstand erheblich. *Schomburgkia vellozicola* Hoehne soll zwar 2-8 subumbellate Blüten haben, doch öffnen sich auch bei dieser Art dieselben nach und nach, wie aus der Figur, welche Blütenknospen in verschiedener Grösse zeigt, hervorgeht. Bei *Schomburgkia* öffnen sich alle Blüten gleichzeitig und die Brakteen scheinen bei allen Arten recht ansehnlich zu sein.

Obgleich uns kein Material von *Schomburgkia vellozicola* vorliegt, glauben wir dieselbe als *Pseudolaelia vellozicola* (Hoehne) C. Porto & Brade unserer neuen Gattung einreihen zu dürfen. Artlich unterscheidet sie sich von *P. corcovadensis* durch die schmalen Petalen und die zugespitzten Seitenlappen der Lippe.

LAELIINAE CATTLEYEAE

III. B. Pollinia 8, biseriata, aequalia.

Clavis generum brasiliensium.

(Vide tab. 1 fig. 20-31 et tab. 3 fig. 1-8)

1. Columna longiuscula vel elongata, paulo incurvata, apice non bilobata.
2. Sepala petalaeque non undulata; labelli lobi laterales columnam involventes

Laelia(Typ. *Laelia speciosa* (H. B. K.) Schltr.)

2. Sepala petalaeque undulata; labelli lobi laterales demum explanati

Schomburgkia(Typ. *Schomburgkia crispa* Ldl.)

1. Columna brevis, suberecta, claviformi, apice bialata vel bilobata.
2. Pseudobulbi apice uni-bifoliati. Labellum liberum vel basi cum columna brevissime connatum.
3. Pseudobulbi apice monophylli

4. Inflorescentia multiflora

Sophronitis(Typ. *Sophronitis cernua* Ldl.)

4. Inflorescentia uniflora vel raro biflora

5. Stigma cordiforme

Eunannos(Typ. *Sophronitis grandiflora* Ldl.)

5. Stigma 2, liguliforme

Sophronitella(Typ. *Sophronitis violacea* Ldl.)

3. Pseudobulbi apice diphylli

Constantia(Typ. *Constantia rupestris* B. Rodr.)

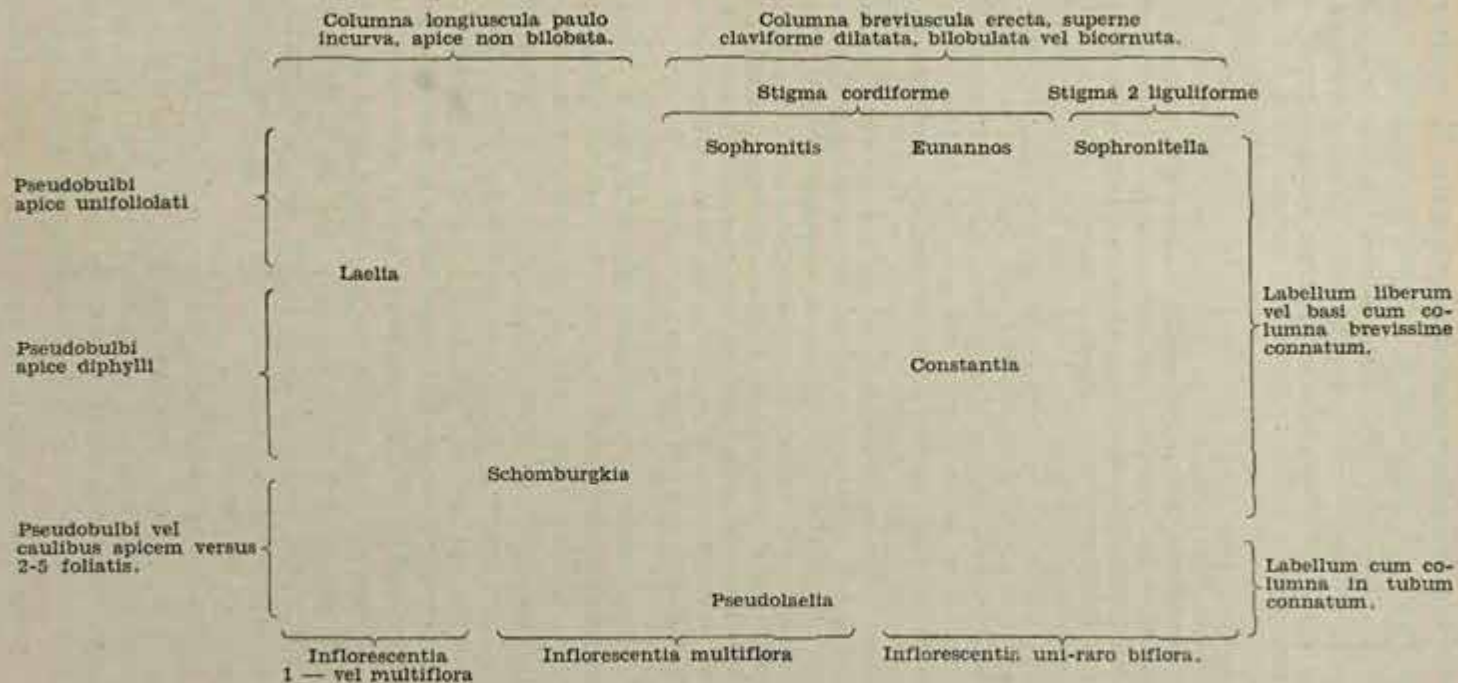
2. Pseudobulbi vel caulibus apicem versus 2-4 foliatus; Labellum cum columna longiuscule connatum.

Pseudolaelia(Typ. *Pseudolaelia corcovadensis* Porto & Brade.)

LAELIINAE-CATTLEYEAE

III. B. POLLINIA 8, BISERIATA, AEQUALIA.

Conspectus generum brasiliensium



4. *Zygostates Octavioreisii* C. Porto & Brade n. sp.

Epiphytica pusilla, circiter 4 cm. alta; rhizomate valde abbreviato, radicibus numerosis, filiformibus, glabris, cinereis; pseudobulbis parvulis, ovoideis vel subglobosis, vaginis 1-2 foliiferis latere utrinque, circiter 3 mm. altis, unifoliatis; foliis erecto-patentibus, oblongo-lanceolatis, acutis basin versus sensim subpetiolato-angustatis, carnosis, ad 16 mm. longis, medio ad 7 mm. latis, nervo mediano supra impresso, subtus carinato; inflorescentia juxta basin pseudobulborum nata, usque ad 4 cm. alta, apice 4-10 flora, pedunculo folio subaequilongo vel paulo longioro, vaginis paucis, deltoideis, basi subcordato, acuminatis vestito, racemo ipso usque ad 20 mm. longo, subsecundo; bracteis deltoideis, acutis, ovario bene brevioribus; floribus in genere mediocribus, tenuibus, glabris, sepalis albovirescentis, petalis albidis, labello viridiflavo; sepalis patulis oblongis, obtusiusculis, uninerviis, dorsalia 4,2 mm. longa, 1,4 mm. lata, lateralibus subobliquis, brevioribus, 3,5 mm. longis; petalis ovato-subspatulatis, obtusiusculis, margine apicem versus crenulato-lacerato, uninerviis, 3,3 mm. longis, 1,6 mm. latis; labello rhomboideo, trilobato, cuculato, carnosulo, nudo, 3-5 nervio, lobis lateralibus, corniformibus, acutis, erectis, subtus carinatis, lobo terminali acuminato rostrato incurvulo, 2,6 mm. longo, 2,5 mm. lato; columna breviuscula erecta, teretiuscula, glabra, rostello perlongo, naviculiforme, clinandrio integro, stelliis juxta basin ovalibus amplis, fere petaloideis, albo-virescentibus, apice incurvis, intus papilloso-puberulis, 2 mm. longis, 1,5 mm. latis; anthera antice longe rostrata; pollinibus 4 obovoideis, stipite elongato filiformi-attenuato; ovario glabro, longe pedicellato, cum pedicello 4 mm. longo.

Habitat: Brasilia. Estado do Rio de Janeiro. Cabo Frio, Mattas da barra S. João, margem do Rio Garguá, Faz. Campos Novos leg. P. Campos Porto 1932 — Exemplar typo Herbario Jardim Botânico Rio de Janeiro, N.º 26.628. — Jardim Botânico cult. N.º 4.843. flor. Set. — Out.

Esta planta, que floresce annualmente no Jardim Botânico, distingue-se facilmente das especies até hoje descritas desse gênero, pelas estelidias (estaminodias) bem desenvolvidas. E' particularmente difficil nesta especie explicar a morphologia desses órgãos, que parecem pertencer ao labello. Além disso as estelidias da planta em apreço têm ainda a função de attrahir os insectos, para o que possui pellos alimenticios, localizados internamente, e que nas outras especies são substituidos pelo callo do labello.

A inserção dos órgãos em questão é igual ás das outras especies de *Zygostates* isto é, em parte por baixo da base do labello. A côr differente, especialmente visivel, depois do tratamento com alcool forte, mostra claramente que não se pode considera-los como appendice do labello.

Com grande satisfação dedicamos esta interessante especie ao Dr. Octavio Reis, membro benemerito do Jardim Botânico, em cujas propriedades foi colligido o material que nos serviu para estudo, e nas quaes o Dr. Octavio Reis estabeleceu um verdadeiro trabalho de protecção á flora e á fauna, digno de ser imitado.

Diese Pflanze, die jedes Jahr hier im Botanischen Garten zur Blüte kommt, unterscheidet sich von den bisher bekannten Arten der Gattung, sofort durch die besonders stark entwickelten Steli-

dien (Staminodien). Es bereitet bei dieser Art besondere Schwierigkeiten, diese Gebilde morphologisch zu erklären, da sie scheinbar der Lippe angehören. Uebernehmen sie doch sogar, durch die, auf der Innenseite vorhandenen "Futterhaare", die Funktion Insekten anzulocken, was bei den anderen Arten dem Callus der Lippe zufällt.

Die Inserierung der fraglichen Gebilde ist durchaus analogen der anderen Zygostates-Arten, d. i. teilweise unter die Lippenbasis greifend. Aber auch die verschiedene Färbung, die besonders nach Behandlung in starkem Alkohol hervortritt, beweist, klar, dass man sie nicht als Anhängsel der Lippe betrachten kann.

Es gereicht uns zu besonderer Freude, diese interessante Art dem Gönner des Botanischen Gartens, Herrn Dr. Octavio Reis zu widmen, auf dessen Besitztum die Pflanze gefunden wurde, wo Flora und Fauna unter seinem besonderen Schutze stehen.

5. *Cryptarrhena brasiliensis* Brade n. sp. (Estampa 4).

Epiphytica, acaulis, 25 cm. alta; radicibus numerosis, filiformibus, glabris; foliis distichis, ligulatis, acutis, basi longe attenuatis, 17-22 cm. longis, 12-20 mm. latis, limbo cum vaginis articulato, satis caduco; nervo mediano subtus paulo prominulo, supra (in sicco) sicut nervulis, vix prominulo; racemis valde arcuatis, foliis aequalibus, inferne vaginis paucis, membranaceis, ochreiformibus, acuminatis, circiter 6 mm. longis, instructis, superne usque ad duae partes, dense multifloris, ad 22 cm. longis; bracteis lineari-subulatis, acutissimis, subreflexis, 2-5 mm. longis; pedicellis patentissimis vel subreflexis, filiformibus, cum ovario 10-12 mm. longis; floribus minutis, virescentibus; sepalis leviter concavis, subaequilongis, acutis, basi vix attenuatis 4 mm. longis, 1,75 mm. latis; petalis spatuliformibus, apice obtuso-subrotundatis, 3 mm. longis, 2 mm. latis; labello subflavo, sepalis lateralibus longiore, anguste longeque unguiculato, limbo profunde quadri-lobato, lobis lateralibus elongatis, lineari-subulatis, suberectis, lobis medianis brevioribus recurvatis, obtusiusculis; columna brevi apoda, glabra, clinandrio margine subtiliter denticulato, rostello longiusculo producto.

Habitat: Brasilia. Estado de São Paulo. Pariquera-Assú. Municipio de Iguape. 100 m. s. n. m. — leg. A. C. Brade N.º 5.075. Março de 1911.

Esta planta foi classificada pelo Prof. Kraenzlin no anno 1914 como *Crypt. Kegeltii*. Sempre duvidamos desta classificação. Não foi possível redescobrir esta especie e verificá-la em material vivo. Por isso resolvemo-nos agora a publicar a especie baseada no unico exemplar existente. Já pela inflorescencia mais curta distingue-se a nossa especie de *C. Kegeltii* e além disso pela columna grossa e curta e as petalas largas e obtusas. — Pela primeira vez foi fixado com certesa um representante deste genero dentro os limites do Brasil, porque o logar indicado do habitat de *C. acrensis* Schltr. acha-se perto, mas fóra dos limites brasileiros.

Diese Pflanze wurde im Jahre 1914 von Prof. Kraenzlin als *Cryptarrhena Kegeltii* Rchb. f. bestimmt. Schon immer bezwei-

felten wir die Richtigkeit dieser Bestimmung; leider war es uns nicht möglich, die Art wieder aufzufinden, weshalb wir uns nun entschlossen, dieselbe nach dem einzigstem, zu Gebote stehendem, Herbar-Exemplar zu beschreiben. — Durch den kurzen Blütenstand, besonders aber durch die kurze, dicke Säule und die breiten, stumpfen Petalen unterscheidet sie sich erheblich von *C. Kegeltii*.

Es ist die erste Art dieses Genus, welche mit Sicherheit innerhalb der Grenzen Brasiliens festgestellt wurde, denn der Standort von *C. acrensis* Schltr. liegt, wenn auch nahe, so doch ausserhalb der Grenze.

EXPLICAÇÃO DAS ESTAMPAS I E III

ESTAMPA I — Fig. 1 — 10. *Constantia cipoensis* Porto & Brade — Fig. 1 — Habito da planta, augment. 1.5: 1; Fig. 2 — Columna e labello vista do lado 2: 1; Fig. 3 — Columna vista dorsal 2: 1; Fig. 4 — Columna vista ventral 3: 1; Fig. 5 — Sepala dorsal 2: 1; Fig. 6 — Sepala lateral 2: 1; Fig. 7 — Petala 2: 1; Fig. 8 — Labello 2: 1; Fig. 9 — Anthera (augmentada); Fig. 10 — Pollinia (1 grupo).

Fig. 11 — 19. *Pseudolaelia corcovadensis* Porto & Brade. — Fig. 11 — Columna vista ventral 4: 1; Fig. 12 — Columna dorsal 4: 1; Fig. 13 — Sepala dorsal 2: 1; Fig. 14 — Sepala lateral 2: 1; Fig. 15 — Petala 2: 1; Fig. 16 — Labello 3: 1; Fig. 17 — Pollinia; Fig. 18 — Columna vista do lado; Fig. 19 — Columna com ovario, corte longitudinal 4: 1.

Fig. 20 — 22. *Schomburgkia crispata* Ldl. — Fig. 20 — Columna com labello vista do lado, tamanho natural; Fig. 21 — Columna vista do lado, tamanho natural; Fig. 22 — Columna vista ventral 2: 1.

Fig. 23 — 24. *Laelia purpurata* Ldl. — Fig. 23 — Columna vista do lado, tamanho natural; Fig. 24 — Columna vista ventral, tamanho natural.

Fig. 25 — 26. *Sophrontia cernua* Ldl. — Fig. 25 — Columna vista do lado 4: 1; Fig. 26 — Columna vista ventral 4: 1.

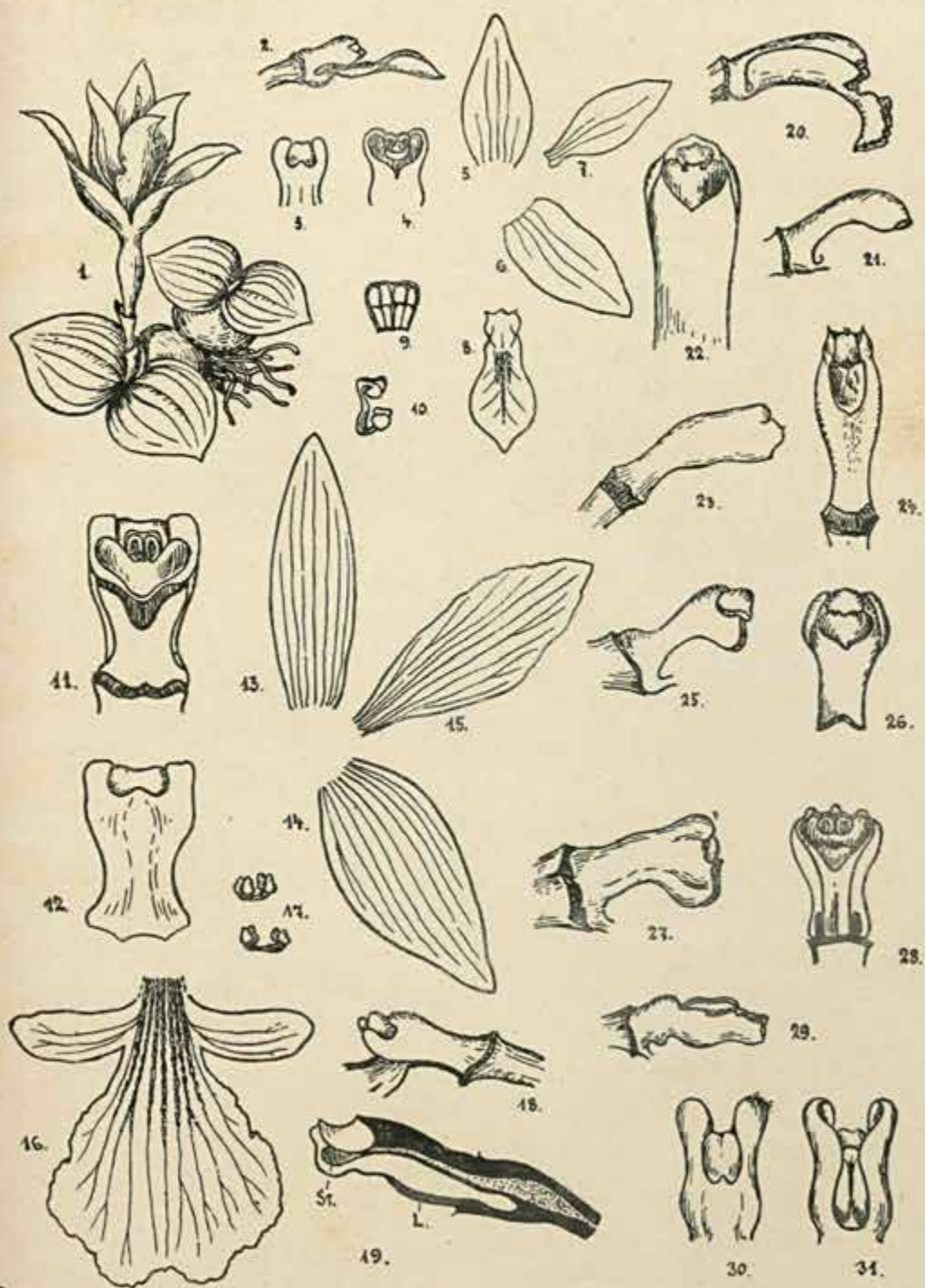
Fig. 27 — 28. *Eunannos coccineus* (Ldl.) — Fig. 27 — Columna vista do lado 4: 1; Fig. 28 — Columna vista ventral 4: 1.

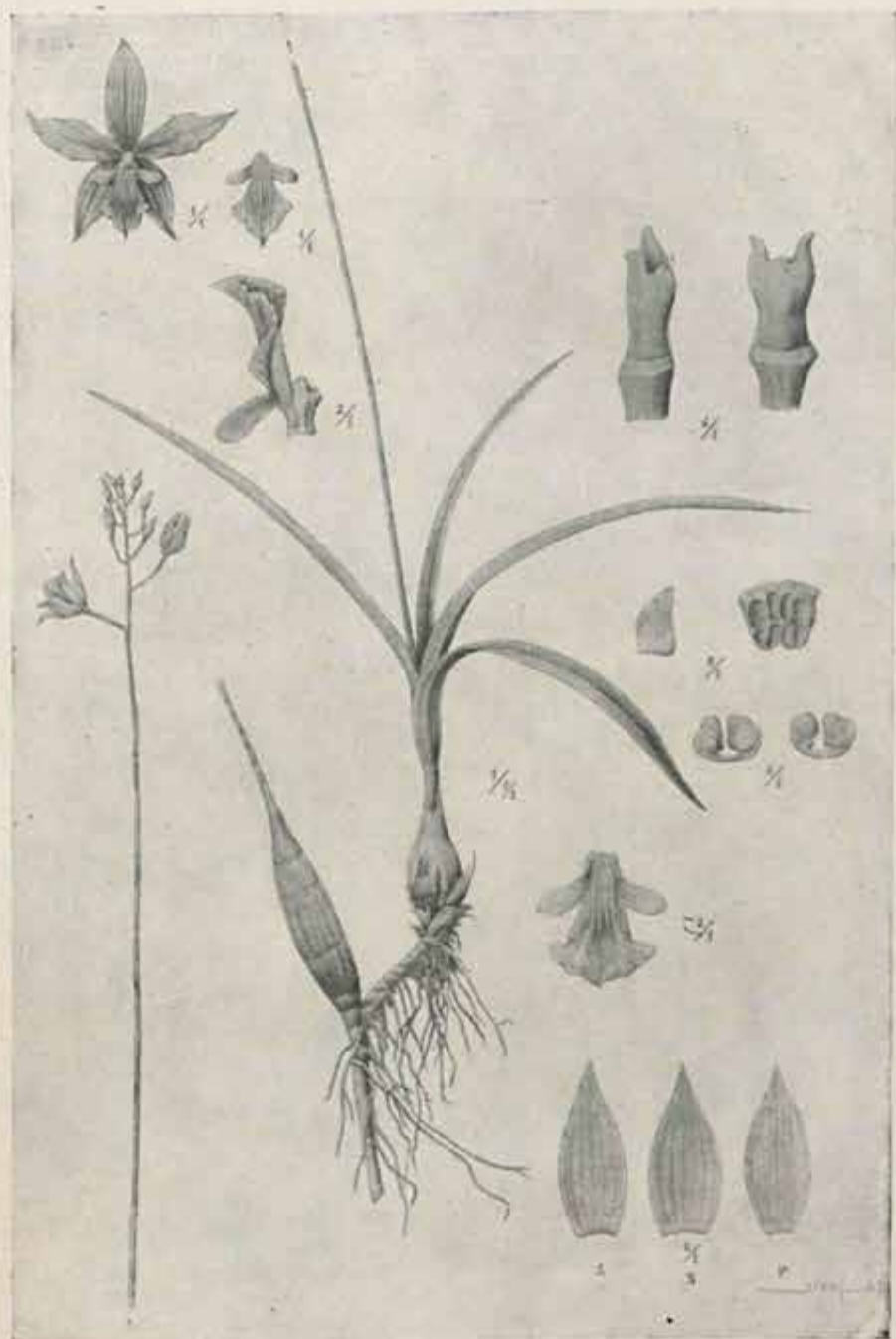
Fig. 29 — 31. *Sophrontella violacea* (Ldl.) Schltr. — Fig. 29 — Columna vista do lado 3: 1; Fig. 30 — Columna vista dorsal 3: 1; Fig. 31 — Columna vista ventral 3: 1. (Brade del.)

ESTAMPA III — Fig. 1-10 — *Constantia rupestris* B. Rodr. — Fig. 1 — Flor 2: 1; Fig. 2 — Sepala dorsal 2: 1; Fig. 3 — Sepala lateral 2: 1; Fig. 4 — Petala 2: 1; Fig. 5 — Labello 4: 1; Fig. 6 — Columna e labello vista do lado 3: 1; Fig. 7 — Columna vista ventral 4: 1; Fig. 8 — Columna vista dorsal 4: 1; Fig. 9 — Columna de uma flor anomala cleistopetala; Fig. 10 — Perigona da mesma flor.

Fig. 11-27 — *Zygostates Octavioreisii* Porto & Brade — Fig. 11 — Habito da planta tamanho natural; Fig. 12 — Flor 5: 1; Fig. 13 — Sepala dorsal 5: 1; Fig. 14 — Sepala lateral 5: 1; Fig. 15 — Petala 5: 1; Fig. 16 — Labello 5: 1; Fig. 17 — Labello 10: 1; Fig. 18 — Estellidia 10: 1; Fig. 19 — Estellidia estendida 10: 1; Fig. 20 — Columna com estellidias e labello 7: 1; Fig. 21 — Columna sem anthera com estellidias; Fig. 22 — Columna sem anthera 10: 1; Fig. 23 — Anthera vista do lado 10: 1; Fig. 24 — Anthera vista de baixo 10: 1; Fig. 25 — Anthera vista do lado 10: 1; Fig. 26 — Pollinia; Fig. 27 — Corte transversal da folha.

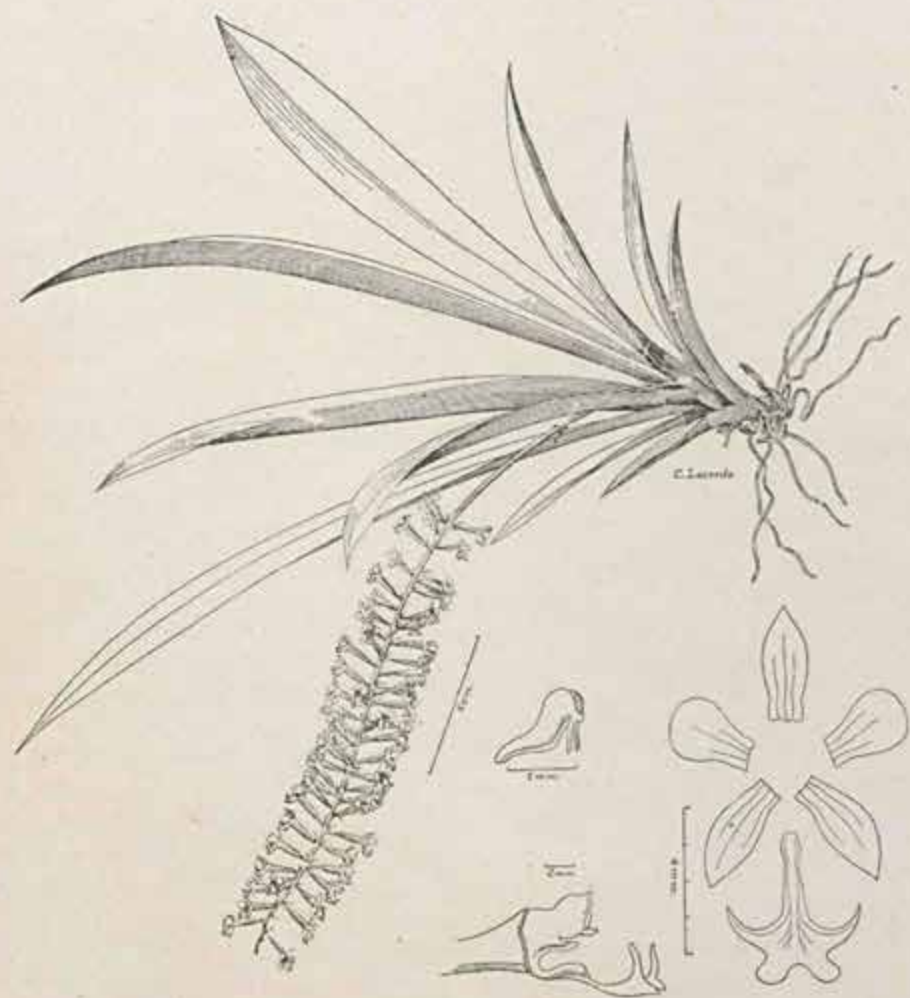
Fig. 28-33 — *Epidendrum magdalenense* Porto & Brade — Fig. 28 — Flor com ovario, tamanho natural; Fig. 29 — Columna com labello 2: 1; Fig. 30 — Sepala dorsal 2: 1; Fig. 31 — Sepala lateral 2: 1; Fig. 32 — Petala 2: 1; Fig. 33 — Labello 2: 1. (Brade del.)





Pseudolaelia corcovadensis C. Porto & Brade. (N. Leal del.)





Cryptarrhena brasiliensis Brade. (C. Lacerda del.)

Habito da planta; anthera; columna e labello, vista de lado; analyse do perigono.

REVISION OF THE GENUS *HEVEA* AUBL. (*), MAINLY
THE BRAZILIAN SPECIES

by

ADOLPHO DUCKE

(With 3 Plates)

The present Revision has been written with the purpose of studying the natural system of the Amazonian rubber trees according to observations made in the field and not only on herbarium samples as hitherto all botanists practised. This method has shown firstly that the number of the "good" species is greatly decreased; the industrial value of these trees, often represented by herbarium material though sometimes incomplete and derived from a single individual, has induced botanists to create new species based upon characteristics which in other condition, were not sufficient to distinguish mere varieties.

Most of the flowering *Hevea*-material kept in the botanical institutions was gathered by the famous botanist Richard Spruce in the beginning of the second half of last century. Most of the diagnoses in Muelier's monographs, completed by Hemsley's work in "Icones Plantarum", have been made according to this material. Huber's "Synopsis" maintains the general point of view of the authors referred to, but has enlarged it by his own observations and by those of Ule. On the other hand, the chapter *Hevea*, as seen in "Pflanzenreich", contains some mistakes, so that its synoptic key is not reliable for determination of species.

(*) — "Nomen caribaeum hévé" (Aublet Plantes Gu.: 871). "Cet arbre est nommé..... hévé par les habitants de la province d'Esmeraldas au nord-ouest de Quito" (p. 872). Hévé, in french orthography, is evidently "jebe" or "jeve" (the peruvian name of the *Hevea*-rubber) where the spanish *j* is substituted by the french *h*. I do not know why Aublet attributed the origin of the name hévé to Esmeraldas on the pacific coast of Ecuador, where the genus *Hevea* is unknown; he employed *Hevea peruviana* and *Hevea guianensis* as synonyms for the same tree which exists in both Guiana and Perú.

J. Huber stated in 1905 (C: 649) in regard to the taxonomy of the genus *Hevea*: "We must not forget that, in the case of many or of almost all the species described up to the present, the specimens found in the herbaria and which served for the descriptions came from one single plant; thus, the specific descriptions are indeed individual descriptions". As a disciple of Huber, I cooperated with him in the collection and preparation of botanical material for the study of the genus *Hevea*, during my long permanency at the "Museu Paraense". As this museum was primarily concerned with the nature of the State of Pará, the exploration of the State of Amazonas, where are found most of the species of this genus, received only secondary consideration. This explains the insufficiency of the herbarium material which Huber studied.

Carl D. La Rue, scientific member of the commission which in 1923-1924 explored the principal rivers of the Amazon Valley with the special object of studying the natural growth conditions of the rubber-trees and the possibility of cultivating them, says (I. c. : 6.)

"Pax pointed out the great difficulty encountered in delimiting species of *Hevea* with such material as available, which, in the case of only a few species, consists of specimens of leaves, flowers and fruits and, even in some of these, offers no certainty that the different structures are derived from the same source. Pax decried the practice (to which he feels Huber was especially addicted) of describing species from leaf specimens only. — From an examination of the type material in the "Museu Goeldi" of a number of Huber's species, the writer is inclined to believe that Huber, although in all probability better acquainted with the genus *Hevea* than any other botanist, was too much inclined to describe species from inadequate material and to base them on rather small and not certainly constant differences. A satisfactory revision of the genus can not be made until more extensive collections than are now available have been assembled. Flowers, or fruit, or both are lacking in too many type specimens. But such extensive collections are not likely to be made in the near future. The genus is widely spread over a sparsely settled country which contains few people with sufficient scientific interest to induce them to make botanical collections. Spruce, long ago, pointed out the difficulty encountered in collecting specimens from *Hevea* — trees 100 to 125 feet high which no native can be induced to climb and which cost much time and much money to fell. The writer can testify that Spruce did not exaggerate the obstacles".

Recently, during my rather long stay in the State of Amazonas, (1929-1930 and 1931-1933) I had the opportunity of collecting, from more than one tree and place, flowering and fruiting material of the species found most frequently in the regions of the

Rio Negro and Rio Solimões (*H. guianensis*, *H. lutea*, *H. Benthamiana*, *H. brasiliensis*, *H. minor*, *H. viridis*, *H. pauciflora* and *H. Spruceana*); thus I was able to notice the great variability of these trees, even with regards to characteristics which, up to the present, have been considered sufficient for establishing sections and subsections to the genus; I noticed also, in several species, a great tendency for hybridation. I can state right from the beginning that the sections *Euhevea* and *Bisiphonia* which have been accepted by all authors, are not natural, for I have found among several specimens of *H. guianensis* some with a slightly irregular androceum, one of the anthers being inserted a little below the others. In trees of this species, growing in the same place, the form of the male buds varies from obtuse (often nearly globose) to shortly acuminate; var. *marginata* itself, with its tough leaves and its enough different seeds, can be considered just a geographical variety of the same species. *H. Benthamiana* is more variable yet with respect to the characteristics of the staminate flowers: this species which has normally strongly acuminate buds, a well developed discus, and 7 to 9 or even 10 anthers, appears in forms reduced throughout, with relatively obtuse buds, 5 to 6 anthers, and even with a small discus in some specimens. The presence or absence of a small style in the pistillate flowers, and specially the length of the staminal column, appears to be of less value than it was previously thought. *H. brasiliensis*, which Huber calls the most variable of all the species of this genus, ought no more to be considered variable but better known than the others species.

GEOGRAPHIC DISTRIBUTION OF THE GENUS

The genus *Hevea* is, perhaps more than any other, characteristic for the "Hylaea": the limits of this region coincide with the geographical area of the genus. In the vicinity of the Atlantic it is found from the Rio Turyassú, in the Brazilian State of Maranhão, up to as far as the lower Essequibo in British Guiana. From Maranhão to Dutch Guiana it is represented by the species *H. guianensis*, and in British Guiana by the species *H. pauciflora*. In the wide Amazon estuary beginning at the mouth of Rio Pará (Collares, Vigia) and ending at the Rio Amapá in the region of Cape Norte, *H. brasiliensis* is very abundant besides *H. guianensis*. The farthest north-western occurrence presently known is in the lower Essequibo, British Guiana (latitude 6 to 7° N.), from where I saw material collected by Jenman (*); it seems that no *Hevea* has yet been found beyond the basin of the Essequibo. On the west of this basin, the northern limit of the genus is lowered, reaching the

(*) — Pax (in Engler Prantl. Nat. Pflanzenfam.) mentions erroneously the latitude of 5° N.

Orinoco only at the region of the "Raudales" or cataracts (according to Spruce and to some Venezuelan informants) and continues in the same latitude of 5° N. along the Rio Vichada (where there has been rubber production) toward the Andes. The limit of the genus reaches, in the subandine zone, according to Pax, down to 16° S., in Bolivia (**), then describes an arc through Matto Grosso in the direction of the Atlantic littoral, reaching it in the northwestern part of the State of Maranhão. As far as the species of the subandine zone are concerned we only know that forms related to *H. lutea* and *H. guianensis* reach this region in eastern Perú (Pongo de Manseriche in the Rio Marañon; Cerro de Canchahuaya near the Ucayali) and ascend to an altitude of 2,000 feet (San Gavan, Departamento Puno). In Matto Grosso, the southernmost occurrence of the genus is at the headwaters of the rivers Sepotuba and Jaurú, tributaries of the Rio Paraguay (14 to 15° S.) where F. C. Hoehne (l.c.: 22, 60) found *H. brasiliensis*; east from the Upper Xingú, the limit of this species has a South North direction and accompanies as far as a certain latitude the eastern border of that river basin (there is no mention of Hevea-rubber in the valley of the Araguaya). There are, however, no data concerning the distribution of *H. guianensis* in the State of Matto-Grosso; on account of this we cannot locate the limit of the genus between the Rio Xingú and the Rio Turyassú, a little river on the Northwest of the State of Maranhão where *Hevea guianensis* marks the eastern limit of the genus in the vicinity of the Atlantic.

The number of species of the genus *Hevea* is certainly inferior to 20, as it is calculated in the second edition of "Natürliche Pflanzenfamilien". In the abundant material which I have studied it does not go over 12. Of these 12 species which I take as "good", 1 grows in the State of Maranhão, 2 in the Guianas, 2 in Matto Grosso, Acre Territory and Bolivia, 4 in the State of Pará, 6 in Perú, 3 in the Venezuelan Territorio Amazonas, 10 in the Brazilian State of Amazonas. 8 species grow in the Rio Negro basin, 8 in the Upper Amazon (Rio Solimões, Peruvian Rio Amazonas and Rio Marañon), 11 in the triangle formed by Upper Amazon and Rio Negro taken together (with the intermediaries Içá and Japurá). Many species are common to the Solimões and Rio Negro basins; it is, by consequence, impossible to establish a sharp limit between species of North and species of South of Equator, as it has been proposed by some authors. The northern species *H. Benthamiana* and *H. lutea* occur even at the south of the Solimões; the southern species *H. brasiliensis* is found also north of the Solimões, in many localities from Tabatinga to Codajaz. The only "good" species (the doubtful ones not being considered) which has not

(**) — With the species *H. brasiliensis*, probably.

yet been found within the above mentioned triangle (Upper Amazon — Rio Negro) is the peculiar *H. camporum* from the "campinas" which lie between the Upper Rio Manicoré and Upper Marmellos, affluents of the Madeira.

In the Upland ("terra firme" in Brazil, "alturas" in Perú) rainforests (*), however generally along the borders of little streams and in other humid or swampy places, there are found *H. guianensis*, *H. lutea*, *H. pauciflora*, *H. viridis*, *H. paludosa*, *H. humilior*, and may be *H. rigidifolia*; *H. brasiliensis* is also found under these conditions in certain regions. In upland "campinas": *H. camporum*. In the lowland ("varzea" in Brazil) forests which are annually invaded during a few months by the flood of the great rivers or lakes, we found *H. brasiliensis* in relatively higher alluvions, *H. Benthamiana* in deeper inundable ground, *H. Spruceana* and *H. minor* at the lowest places.

H. lutea, *H. guianensis*, and, in certain regions, even *H. brasiliensis*, can attain a height of 30 to 40, and perhaps more, meters. The stem of these, chiefly of the first two species, is cylindrical as in the majority of the big trees of the upland rainy forest. *H. Spruceana*, *H. Benthamiana* and *H. minor* are generally of medium size and have the stem swollen at the basis but suddenly slender to the top: a peculiar stem form, typical for the trees of the permanently swampy "igapó" in the "varzea" (periodically inundable alluvion). There are frequently found individuals of *H. Benthamiana* f. *Huberiana*, *H. minor* and *H. humilior* flowering after having reached only a few meters in height. Even *H. guianensis* var. *marginata* which is ordinarily a high tree, is found flowering at such a low height when grown on very poor soils. A remarkable exception in this genus is *H. camporum*, a little shrub of certain "campinas".

All the *Hevea* — species have yellowish white or more or less pale brownish yellow flowers, with the sole exception of *H. Spruceana* whose flower bases are dark red brown or brown violet. The capsule of all species, with the exception of *H. minor*, has elastic ligneous valves; it bursts with a violent crack and shoots, in the majority of species, the fragments of its valves and the seeds at a great distance. In the case of *H. Spruceana*, however, after the sudden burst of the capsule, the seeds fall in the water which never lacks under the tree, but the splitvalves remain adherent to the peduncle. The only species *H. minor* has a thin coriaceous capsule with a slow dehiscence.

The *Hevea*-species bloom, in normal years, chiefly in the middle of the dryer season or a little before, and mature their fruits

(*) — Woods which are not subjected to the yearly flood of the great rivers.

in the correspondent period of the wet season. September and March mark the season climaxes for the greatest part of Amazonia. In the most Southern parts of this region, however, the seasons advance, and in the northern part they retard themselves a month or more. In the most northwestern parts of Amazonia where no marked rainy-season exists, the *Hevea* flowering and fructifying periods are very irregular. The smaller trees flower before the larger; the trees growing in more open places (forest margins, neighbourhood of clearings, etc.) flower earlier than those of the interior of dense forests. For such reasons, the cultivated *H. brasiliensis* trees are the first, and the big virgin forest trees of *H. guianensis* and *H. lutea* are the last representatives of this genus which flower during the year, with the exception of the common "seringueira barriguda" (*H. Spruceana*) which flowers as well in the highest water level in the flooded woods as during the whole decrease period of the flood.

The latex of the *Heveas* is bright yellow in certain species (*guianensis*, *lutea*) and white in others (*brasiliensis*, *Benthamiana*, *viridis*, *Spruceana*). No conclusion on the commercial value of the latex can be based of its colour; it is equally white in the best and in the worst of all species (*brasiliensis* and *Spruceana*). *H. brasiliensis*, the specie which yields the best and the copious latex, is the sole specie which retains its value. In few places of the Rio Negro there still subsists a little production of the "fina fraca" rubber of *H. Benthamiana*. The species *H. guianensis* and *H. lutea* which formerly produced the "borracha fraca" are wholly abandoned; only in Fontebôa (Solimões river) where exist *H. lutea* — trees of an exceptional size, I found these explored yet in 1929. The remaining species of the genus have never had any economical importance, and the latex of *H. Spruceana* has always been considered improper for rubber production.

The vernacular names more frequently used in Brazilian Amazonia are the following: "seringueira (or "seringa") itaúba" (*) for *H. guianensis* in the whole Amazonia except the littoral zone of Pará which includes the great Amazon and Tocantis estuary and its affluents; for *H. lutea* in the Solimões and Içá regions.

"ser. vermelha" (1) or "ser. amarella" (2), for *H. guianensis* in the State of Pará, rarely in the State of Amazonas.

"ser. torrada" (3), for the inferior forms of *H. Benthamiana* in the lower Rio Negro, but (according to Huber) for *H. guianensis* in the Tapajoz.

(*) — "Itaúba is the name of the species of *Silvia* (*lauraceae*), chiefly *S. itaúba* (Meisn.) Mez, famous in Amazon on account of its excellent wood. The two cited *Hevea* — species resemble the Itaúba-trees by the dark colour and nearly erect position of the leaves.

(1) — Red seringueira, on account of the reddish bark of the young branches.

(2) — Yellow seringueira, on account of the colour of the latex.

(3) — Toasted seringueira, because of the relatively dry bark and scarce latex.

"ser. chicote" (4), for *H. Benthamiana* in the lower Rio Negro and in the tributaries of the Rio Solimões.

"ser. pescoço de veado" (5), for the superior forms of *H. Benthamiana* in the lower Rio Negro.

"ser. branca" (6), for *H. brasiliensis* throughout all its geographic area in Brazil; occasionally also for superior forms of *H. Benthamiana*, in the Rio Branco and lower Japurá.

"ser. preta" (7), for the superior forms of *H. brasiliensis*, throughout its whole geographic area in Brazil.

"ser. legitima", for *H. brasiliensis*, in the neighbourhood of the frontiers of Perú and Bolivia where this name is of current use.

"ser. folha de maniva" (8), for *H. brasiliensis*, in the Solimões-region.

"ser. barriguda" (9), for *H. Spruceana*, throughout its geographic area; for *H. minor*, in the Rio Negro.

"ser. tambaqui" (10), for *H. Spruceana* and *H. minor* in the Rio Negro.

During the period of intense exploration of the Amazonian rubber, the "seringueiros" (rubber collectors) invented a number of designations for local forms of these trees, generally on account of the consistence and colour of the bark — names which have actually disappeared.

The 12 *Hevea*-species that at present I consider "good", have the following geographical distribution:

1. — *H. guianensis*: Upland forest in the whole Brazilian hyalaea with exception of the northwestern part (upper Rio Negro, Japurá etc.) and perhaps of the extreme South, and in French and Dutch Guiana.

Subspecies *typica*: From the vicinity of the Atlantic (between the northwestern part of the Brazilian State of Maranhão at one side, and Dutch Guiana at the other) as far as the lower Madeira and middle Rio Negro.

Subsp. *occidentalis*: Middle Madeira and western part of the Solimões. The incompletely known *H. nigra*, of the upper Juruá, and *H. cuneata*, of the lower Ucayali, are probably synonymous of this subspecies.

Subsp. *marginata*: Manáos and north of Lago de Faro.

2. — *H. lutea*: Upland forest of the upper Rio Negro, lower Içá and western part of the Solimões.

(4) — Whip seringueira, because of the form of the stem.

(5) — Deer neck seringueira, because of the stem form.

(6) — White seringueira, because of the light coloured bark.

(7) — Black seringueira, because of the darker colour of its bark.

(8) — The leaves resemble a cassave leaf ("folha de maniva").

(9) — Due to the "big bellied" (barriguda) base of the stems.

(10) — The "tambaqui" is a big and savoury fish which eats the seeds of these trees.

The truly *typic form* is found in the upper Rio Negro.

f. *pilosula* and transitions to the type: lower Içá and western parts of the Solimões. *H. apiculata* (Cassiquiare) as well as *H. Foxii* and *H. glabrescens* (both of the Putumayo) are very affin or perhaps synonymous of this.

?Var *peruviana*: Eastern Peruvian Andes.

3. — *H. Benthamiana*: Periodically inundable lowland forest in the northwestern part of the State of Pará (middle and upper Trombetas and Nhamundá) and in the northern and western parts of the State of Amazonas (Rio Negro, Japurá, Içá, Rio Solimões, lower Juruá, lower Jutahy) as well as in the Venezuelan and Colombian parts of the hylaea (upper Orinoco, Cassiquiare and upper Rio Negro).

f. *Huberiana*: Manáos, low forest of secondary growth in very poor soil at the limit of the inundable ground.

f. *subglabrifolia*: Manáos.

f. *caudata*: Rio Apuahú (tributary of the lower Rio Negro).

f. *obtusiloba*: Rio Apuahú.

4. — *H. rigidifolia*: "Catingas" of the Rio Uaupés

5. — *H. brasiliensis*: Inundable or marshy lowland forest, and in certain regions (hills and plateaus between the middle Xingú and the Madeira) also in the upland forest. Amazonian estuary and lower course of its tributaries, including the Rio Amapá; the whole region of southern affluents of the lower Amazon and Solimões as far as the Ucayali; the southern and the northern margin of the Solimões.

f. *Randiana*: A tree of unknown origin, cultivated on the Pará-Museum.

f. *subconcolor*: Rio Madeira (Porto Velho) and Solimões (São Paulo de Olivença).

6. — *H. paludosa*: Swampy places in the upland forest around Iquitos.

7. — *H. humilior*: Swampy places in low secondary forest near Iquitos.

8. — *H. viridis*: Swampy upland forest along little streams, and (in the upper Rio Negro region) marshy "catinga". Lower Madeira, upper Rio Negro, lower Huallaga, and Rio Putumayo.

9. — *H. pauciflora*: Upland forest, chiefly of lower growth (hill forest and "catinga"), in the upper Rio Negro — region, in the western part of the Solimões (São Paulo de Olivença) and in the Essequibo river with its affluent Mazaruni and confluent Potaro.

subsp. *typica*: Upper Rio Negro with the Uaupés, and Potaro River.

subsp. *coriacea*: Western part of the Solimões (São Paulo de Olivença), upper Rio Negro ("catingas" around Camanáos), and perhaps British Guiana.

H. confusa, of the Esequibo basin, may be identical with subsp. *coriacea*, or perhaps another subspecies.

10. — *H. Spruceana*: Profoundly inundable or permanently flooded woods in the vicinity of lakes and along slow or stagnant rivers, from the Rio Maracá (a northern tributary of the mouth of the Amazon) as far as above the Içá, and in the lower courses of all the affluents.

11. — *H. minor*: Profoundly inundable woods in the western part of the lower Rio Negro, and in the Cassiquiare.

12. — *H. camporum*: Campinas between the upper courses of Manicoré and Marmellos, affluents of the Rio Madeira.

KAY TO THE SPECIES

A — Capsule relatively small, of pyramidal form, with acute apex and a more or less evident dorsal keel in each carpel, thin pericarp, and coriaceous valves at maturity; it opens with a slow dehiscence and lets the seeds fall in the water; the capsule, then, twists itself and remains for a long time adherent to the peduncle. Seeds ovoid with tendency to indistinctly quadrangular, 20-25 mm. long, 12-15 mm. wide. Flowers pale yellowish, excessively elongate and acuminate in the bud; the staminate flowers have a discus of 5 acuminate-ovoid glands and 10 anthers ranged in 2 verticils; the pistillate flowers are very different from those of all other species by its large campanulate torus which is broader than the base of the calyx and has a collar padded summit. Leaves little or medium sized, glabrous, subconcolor, a little shining even at the lower surface. A tree of 5 to 20 m. in height, with swollen base of the trunk and with more or less reclinate leaves.

11. *H. minor*.

B — Capsule voluminous, ellipsoid or, seldom, nearly globose, with thick almost suberous pericarp and ligneous valves; mature, it burst suddenly and the seeds fall in the water, but the split valves remain adherent to the peduncle. The seeds are much more elongate than in any other species; their normal length is over 35 mm. and exceeds frequently 40 mm.; the width is half to two thirds of the length; the thickness is less than half the length. Flowers commonly large (for the genus), pale yellowish with dark violaceous or red brown calyx tube; the staminate flowers are more or less obtuse, with a discus composed of 5 glands or lobules more or less obtuse and with 10 (rarely 7 to 9) anthers in two verticils. Leaves ample, pale beneath and (with rare exceptions) more or less pubescent. A scarcely medium sized tree with swollen trunk base.

10. *H. Spruceana*.

C — Capsule ligneous with rather thin subcarneous pericarp, obtuse, laterally emarginate due to the three strongly salient carpels; mature, it bursts suddenly with a violent crack and shoots the fragments of the valves and the seeds at a great distance. Seeds ellipsoid, ovoid, indistinctly quadrangular or nearly cubic.

a — Capsule excessively small (for the genus), dimensions of the seeds 11 x 7 x 6 mm. Flowers unknown. A shrub.

12. *H. camporum*.

b — Capsule much larger, the dimensions of the seeds at least 14 x 13 x 12 mm. Flowers yellowish-white or brownish-yellow.

I — 5 anthers (rarely 4, and more rarely 6) forming a single verticil which is perfectly regular or, in some specimens, slightly irregular having one of the anthers inserted a little below the others. Staminate flowers obtuse or very shortly acuminate in the bud; discus insignificant or absent. Inflorescences pubescent. High trees with cylindrical stem (when normal; leaves glabrous, in erect position).

1. *H. guianensis*.

II — 5 or 6 anthers in a very irregular verticil, or 7 to 10 anthers in two regular or irregular verticils.

1 — Discus of the staminate flowers very small or absent; bud of these flowers acuminate. Inflorescences rather pubescent.

x — Anthers more frequently 5, 6 less frequently rarely 7 or 8, in one very irregular or rarely in two incomplete verticils. Big trees with cylindrical stem; leaves erect, glabrous or pubescent beneath.

2. *H. lutea*.

xx — Anthers normally 10, in two regular verticils. High trees; leaves reclinate, glabrous.

5. *H. brasiliensis*.

2 — Discus of the staminate flowers well developed.

x — Staminate-flower buds very obtuse (nearly globose); 5 anthers forming an irregular verticil; discus with 5 distinctly acuminate lobules. Inflorescences pubescent. A small tree; leaves erect, pubescent beneath.

H. gracilis, = *guianensis* x *Benthamiana*.

xx — Staminate-flower buds acuminate; anthers 5 to 10. Medium sized or little, rarely high trees.

0 — Lobules of the discus normally elongate and acuminate, rarely more or less reduced; anthers normally 6 to 9, sometimes 5, rarely 10. Inflorescences densely pubescent. Leaves reclined or horizontal, never erect, plane, membranaceous or thin coriaceous, more or less densely pilose beneath.

3. *H. Benthamiana*.

00 — Discus with long frequently subulate lacinae; anthers 6 to 10. Leaves glabrous, hard coriaceous with recurved margins; their position is not indicated by the collector (R. Spruce). Not seen.

4. *H. rigidifolia*.

xxx — Staminate-flower buds subacuminate with obtuse point, or obtuse, but never subglobose; anthers 7 to 10, in two more or less regular verticils.

0 — Staminate-flower buds subobtusate or subacuminate with obtuse point. Inflorescences subglabrous. Leaves glabrous, pale and not shining beneath.

† — Pedicels longer than in any other species. Discus of the staminate flowers with relatively short, obtuse or acute, glands; the two verticils of the anthers frequently incomplete. A high or medium sized tree; leaves erect, obovate-lanceolate.

6. *H. paludosa*.

†† — Pedicels short, as usual in the genus. Staminate flower discus with elongate lanceolate glands; the two anther verticils are nearly always complete. A small tree; leaves not erect, with oblongo-obovate or elliptico-obovate leaflets.

7. *H. humilior*.

00 — Staminate flower buds perfectly obtuse; discus composed of 5 medium sized glands or 5-lobate. Leaves reclined or semierect.

† — Leaflets equally green and shining in both pages, glabrous. Inflorescences subglabrous.

8. *H. viridis*.

†† — Leaflets pale and not shining beneath, glabrous or subglabrous. Inflorescences subglabrous or thinly pubescent.

9. *H. pauciflora*.

1. *H. guianensis* Aubl.

Vernacular names: "seringueira vermelha" or "ser. amarella" in the vicinity of the Atlantic littoral and in the Amazon-Tocantins estuary, in the latter even sometimes "seringa mangue" or "seringa-rana" (according to Huber); "seringueira itaúba" in the western part of the lower Amazon, in Manáos and in the Solimões (here in promiscuousness with *H. lutea*); "seringueira da terra firme" in Porto Velho (Rio Madeira).

The geographical area of this specie is the widest in the present genus and seems to comprise the whole hylaea except its extreme northern and northwestern parts (British Guiana and the Amazonian parts of Venezuela and Colombia). The specie, however, occurs in three well characterized geographical varieties (subspecies): the typic form, growing in the eastern half of the hylaea; var. *marginata*, known only of the lower Rio Negro and Nhamundá; var. *occidentalis*, of the southwestern part of the hylaea.

H. guianensis typica. A high tree of 30 to 40 m., with a cylindrical not too thick stem, and with dense and very dark foliage. Latex bright yellow. Old branchlets with persistent scales at the

terminal bud. Mature leaves erect, varying from solid membranaceous to thin coriaceous, commonly obovate with obtuse or roundish and apiculate apex, glabrous. Staminate flowers with 5 (sometimes 4, rarely 6) anthers forming one only verticil, which, normally, is perfectly regular, but has, in some cases, one of the anthers inserted a little below the others; discus insignificant; buds obtuse (subglobose) or shortly acuminate (*) with all gradual transitions. Pistillate flowers with sessil stigmata. Capsule smaller than that of *H. brasiliensis*, and with more prominent (more profoundly divided) carpels; seeds small for the genus (length 17-20 mm., width and thickness 14-18 mm.), subglobose, with numerous dark brown lines beyond the larger spots of the same colour.

Frequent in the upland rain forests of the eastern half of the hylaea, from the Rio Turyassú (State of Maranhão) as far as Dutch Guiana along the vicinity of the Atlantic and from this latter to the lower Madeira and middle Rio Negro. Grows always in humid soil, but prefers the neighbourhood of sources or the banks of little streams. Furnished formerly considerable quantities of a weak rubber ("borracha fraca"), which has lately disappeared from the trade.

Herbarium material examined (**): State of Pará: Belem do Pará, 20.591 (floriferous twigs and seeds) and 21.720 (sterile twig with stiff leaves indicating an approximation to var. *marginata*); Breves in the Amazon estuary, florif., 20.592 and Herb. Amaz. Mus. Pará n. 17.042; Santarem, 17.706 (florif. twigs and seeds; staminate flower buds a little acuminate); between Cuminá-mirim and Ariramba, confluents of Rio Trombetas, Herb. Amaz. 7.983 (fructiferous, with semi-adult capsules); Faro, Herb. Amaz. 8.590 and 8.704 (florif.); Serra de Parintins in the limit with the State of Amazonas, Herb. Amaz. 8.728 (floriferous specimens with scarcely pubescent inflorescences and rather acuminate staminate buds, type of *H. collina* Hub.). — State of Amazonas: Maués, 21.712 (sterile young tree) and 21.713 (old floriferous tree); Borba, lower Madeira, 21.709 (florif. and fructif.); Santa Izabel, Rio Negro, banks near the rapids of Tapuruquara, 21.711, 21.717 and 21.718 (floriferous twigs, the last number having a seed).

***H. guianensis* var. (subspecies) *marginata* Ducke 1930 (*H. marginata* Ducke 1929).**

(*) — I have found this bud form only from Santarem upwards, in the western part of the lower Amazon.

(**) — The numbers refer to the Herbarium of Jardim Botânico do Rio de Janeiro (H. J. B. R.), and the collector is the author of this Revision (A. Ducke), except in expressly mentioned cases. H. A. M. P. (Herbarium Amazonicum Musaei Paraensis) is the Herbarium of the ancient "Museu Paraense" or Goeldi Museum. Duplicates of all species and varieties I collected have been distributed to the botanical institutions to Berlin-Dahlem, Chicago, Geneve, Kew, New York, Paris, Stockholm, Utrecht and Washington.

Distinguished, from the typical form of this species, principally by the more rigid coriaceous and prominently marginate leaves; the trees are generally lower (no more than 10 to 20 m. high); the leaflets are rounded or very obtuse at the apex, but exceedingly variable with respect to the length-width ratio; the staminate flower buds are, oftener than in the typical form, a little acuminate; the capsules are frequently larger and the seeds a little longer, approaching those of the smaller forms of *H. Benthamiana*.

Grows in the upland forest, in white sandy soil with black acid humus, chiefly in moist places or along little streams; common around Manáos and found even near the mouth of Rio Nhamundá in the lake of Faro. The vernacular name is "seringueira itaúba" as in the typical form, but the latex only in exceptional cases may have been used for rubber production.

Frequent around Manáos; our herbarium samples come from the following localities: upper Tarumá, 21.727 (florif.) and 21.719 (florif. and with one semiadult capsule, the form of the leaves remembering the typical *guianensis*; Cachoeira do Mindú, 21.724 (floriferous, with short and very broad leaflets); Estrada do Aleixo, 21.723 and 21.728 (florif. and fructif.); Estrada da Raiz, 21.725 (florif.); Cachoeira Grande, 20.593 (fructif.); Campo Experimental, cultivated trees original from Colonia do Tarumá, 7.317 and 7.674 (floriferous, coll. Kuhlmann), and 21.726, 21.721 and 21.722 (florif. and fructif., the two latter with very narrow leaflets). Ule's numbers 5.348 and 8.900, both of Manáos and sterile, belong certainly to this subspecies (*). — Besides Manáos, I found the latter hitherto only in the forest around the sandy Campina do Infiry near the mouth of Rio Nhamundá in the northern extremity of the Lago de Faro, western limit of the State of Pará, 20.594 (fructiferous twig with young capsules).

H. guianensis var. (subspecies) *occidentalis* Ducke nov. nom., = *H. guianensis* var. *cuneata* Ducke (an *H. cuneata* Hub.), = *H. nigra* Ule?

Resembles the typical *H. guianensis* in all the vegetative parts and in the flowers; the seeds, however, are nearly cubical and very angulous, they have relatively few little brown lines and points, but are marked by some large and very dark spots which sharply detach themselves over the light ground. The leaflets are most frequently coriaceous but never marginate, those of the sterile branches have generally a cuneiform base. The staminate flower buds are constantly subglobose.

(*) — The elongate seeds which Ule (a: 670) attributed to N° 5.348 and distributed with it, belong to *H. Spruceana* which is very common in the same region. Subsequently, the same botanist found the true seeds of *marginata* which he considered as a probably new species (b: 17 note 1).

This variety is found in the upland rainy forest of the western part of the hylaea, South of the Amazon River. The trees I have observed grow in argilous soil, generally in the vicinity of streamlets; they furnished formerly a little quantity of "borracha fraca".

Herbarium material: Porto Velho, Rio Madeira, State of Amazonas at the limit of the State of Matto Grosso, 21.959 (florif. and fructif.) and 21.960 (fructiferous; the colour of the seeds shows a transition to *H. guianensis* typica); São Paulo de Olivença, southern part of the Solimões river, 21.714, 21.715, 21.716, and 23.742 (floriferous twigs), and 23.630 (fructiferous).

H. nigra Ule is doubtless one of the subspecies of *H. guianensis* (probably *occidentalis*, but the sheets have only staminate flowers and the seeds are unknown). A high tree of the upland forest of Rio Juruá-miry tributary of the upper Juruá, Acre Territory, Ule 2.058. I saw a cotypical specimen.

H. cuneata Hub. 1905 = *H. lutea* var. *cuneata* Hub. 1902, of Cerro de Canchahuaya, Rio Ucayali, Perú, is only represented in the herbaria by sterile material. The leaves resemble both *T. guianensis* var. *occidentalis* and *H. peruviana* Lech., which is, according to Hemsley, a mere variety of *H. lutea*. A tree in the garden of the Goeldi Museum of Pará, planted by Huber in 1898, has never flowered in spite of its sufficient development. A similar sterile specimen was collected by La Rue at Pongo de Manseriche, eastern Perú. The vernacular name of Huber's tree is "shiringa amarilla" or "shiringa del cerro".

2. *Hevea lutea* (Benth.) M. Arg.

The typical form is a 15 to 30 m. high tree with cylindrical stem. Latex yellow. Leaves in erect position, perfectly glabrous, subcoriaceous; the leaflets vary in form and size but are constately more or less obovate or oblongo-obovate and shortly acuminate or apiculate. Flower buds distinctly acuminate; the staminate flowers with rudimentary discus and 5 (rarely 6) anthers in a single irregular verticil; the pistillate flowers have a sericeous ovary, and their stigmata form a short style. The capsule remembers *H. Benthamiana* typica but the seeds are of a lighter colour.

Frequent in the upland rainy forest of the upper Rio Negro and its affluents, having been found by R. Spruce from the mouth of Rio Uaupés up to as far as the lower Cassiquiare, and by myself from the confluence of Rio Curicuriary to the lower Uaupés. It furnished formerly "borracha fraca" but is not explored actually; I have not been able to find out if it had a peculiar vernacular name.

Herbarium material: Iucaby, a little above the mouth of the Curicuriary, 21.745, 21.746 and 21.747 (floriferous), 23.743 (fru-

ctiferous, with semiadult capsules and some seeds collected under the tree); São Gabriel, 21.954 (floriferous); below Camanáos, 21.748 (floriferous).

***H. lutea* var (forma?) *pilosula* Ducke.**

Vernacular name: "seringueira itaúba", as well as in *H. guianensis*.

A big tree 25 to 45 m. high, which differs from the typical *lutea* for the presence of a little whitish pubescence in the nervures of the inferior page of the leaves. Flowers and fruits like those of the typical *lutea*, the fruits often a little larger.

Frequent in the upland rainy forest of certain localities of the Solimões and of the lower Içá basin, along little streamlets and in other moist places. Furnishes still little quantities of "borracha fraca" around Fontebôa.

Herbarium material: Fontebôa, right bank of the Solimões river, 20.601, 21.749, 21.750, 21.951, 21.952, 21.953 (all these are floriferous, except the last number); forest between Jacurapá and Puruité, tributaries of the lower Içá, 21.955, 21.956 and 23.744 (floriferous). — N. 21.749, from Fontebôa, has subglabrous leaves not unlike those of the typical *lutea* from the Rio Negro, but the flowers have, in the same inflorescence, 5, 6, 7, or 8 anthers forming as many as two incomplete verticils; the staminal column is seldom entire or bifid, more frequently trifid at summit (*). This plant shows a very exuberant development of all its parts.

The following insufficiently known "species" are much probably mere varieties of *H. lutea*:

***Hevea Foxii* Huber** (vernacular name: ituri), of the river Igarapará tributary of the Rio Putumayo in southeastern Colombia, differs from *H. lutea* for the well developed reddish pubescence of the nervures of the inferior page of the leaflets (also in the oldest of them), and, according to Huber, for the shortly pedicellate stigmata (**). I examined the type.

***Hevea apiculata* Baill.**, of the upper Rio Negro and lower Casiquiare, would be a "good species" according to Spruce, Baillon and Huber, but is in the opinion of Mueller d'Argovie and Hemsley only a variety of *lutea*, of which it distinguishes itself for its short leaflets pubescent beneath when young, for the short annular and tenuous discus of the staminate flowers, and for the large, bilobate and pedicellate stigmata. All these characters are, however, of a very little value. I have not collected this supposed species, the type of which (originary of San Carlos, Venezuelan Rio Negro) has been seen by Huber.

(*) — An analogous case has been observed in a variety of *H. Spruceana*.

(**) — A very inconstant character.

Hevea glabrescens Hub., of the Rio Putumayo, Colombia, has glabrous adult leaves, short annular and tenuous discus in the staminate flowers, and little punctiform pedicellate stigmata. But the material is still more insufficient than in the two former plants.

Hevea peruviana Lechl., of the subandine eastern Perú (San Gavan, 2000 feet, Department Puno), is by Hemsley considered a variation of *H. lutea* it resembles effectively the typical form of this last by the entirely glabrous leaves, the anthers and the undeveloped discus, but has sessile stigmata. Huber examined the type of this plant; I have obtained, by the kindness of Dr. Sandwith in Kew, a photograph and a staminate flower of it and I find the form of the leaves very like those of certain trees of *H. guianensis* var. *occidentalis*. It is convenient to remember that Huber considered his *H. cuneata*, only known in sterile material, as identical with *H. peruviana* (see Huber, b. 357 note 2).

3. *Hevea Benthamiana* Muell. Arg. (inclusive *H. Duckei* Hub.).

Vernacular names very uncertain and variable according to the localities. The most used names are the following: "seringueira chicote" (lower Rio Negro and Solimões), "ser. torrada" (also in the Rio Negro, but used principally with regards to trees with a relatively scarcely rubber yield), "ser. pescoço de veado" (less used, lower Rio Negro), "ser. bôa" (occasionally used, Rio Trombetas), "ser. branca", "ser. fogo", "ser. roxa" (Rio Branco, according to Kuhlmann).

The geographical area of this species comprehends the northwestern part of the State of Pará (*), the whole part of the State of Amazonas north of the great river, and the lower courses of the southern tributaries of the Solimões. Furnishes a good rubber, the best after that of *H. brasiliensis*, which was exported in great quantities as "borracha fina fraca", part as "borracha fina".

The typical form is a medium sized tree (up to 15 or rarely 18 m. high) with swollen trunk base suddenly slendering upwards; latex white. Leaves in a more or less horizontal position, never evidently erect as in the two precedent species, but not so reclined as in *H. brasiliensis*; the ample leaflets remember *H. Spruceana* but the pubescence of the inferior surface is reddish; the mature leaves are subcoriaceous. The indumentum of the inflorescences is a dense reddish pubescence; the flowers are more or less long (**) acuminate.

(*) — *H. Benthamiana* is signaled in the general map of the work William S. Schurz and others, for the rivers Maecurú, Pará and Jary, left tributaries of the eastern part of the lower Amazon. I do not know what is the origin of this information which needs to be confirmed by new observations.

(**) — An individual with relatively shortly acuminate buds and with less developed leaves has been described as *H. Duckei*.

nated, the staminate flowers having a discus with 5 well developed points or laciniae and commonly 7 to 9 (rarely 6 or 10) anthers forming two incomplet verticils. Capsule with the three carpels profoundly divided and, consecutively, much salient; seeds ellipsoid, very little compressed, 21 to 29 mm. long, 17 to 21 mm. wide and a little less thick, generally with very abundant dark spots.

Grows in the "igapó" (swampy forest) periodically flooded by rivers with colourless or "black" water, poor in sediments.

Herbarium material: State of Pará: Rio Trombetas, Cachoeira (cataract) Porteira, and Rio Mapuera tributary of the Trombetas, upper cataract region, H. A. M. P. 9.046, with young capsules. State of Amazonas: Manáos, Igarapé de Marapatá, 23.747 (florif. and fructif.); Lower Rio Negro, Paran de Anavilhana, 21.732 (florif.); Carvoeiro, 23.745 (florif.); Rio Uniny tributary of the lower Rio Negro, 21.710 (florif.); islands near So Joaquim, cultivate, 21.735 (florif. and fructif.); Santa Izabel, 21.731, 23.746 (florif.); Iucabi above the mouth of the Curicuriary in the upper Rio Negro, 21.734 (florif.); So Gabriel, 21.730 (florif. and seeds); lower Rio Branco, coll. Kuhlmann, 2.791, 2.945, 2.947 and 2.948 (florif.), 7.313 (fructif.); Jubar, lower Japur, H. A. M. P. 6.779 (florif. type of *H. Duckei* Hub.); Rio Jacurap tributary of the lower I, 21.729 and 21.733 (florif.), and 23.628 (fructif.); mouth of the Rio Juru, coll. Kuhlmann, 1.094 (florif.); Rio Sap tributary of the lower Rio Jutahy, 20.600 (fructif.). The ns. 21.710 and 23.745 were received under the denomination "seringueira torrada", the first by Dr. A. Jobim in Manos, the last by the zoologic collector Mr. Lak.

H. Benthamiana f. **Huberiana** Ducke (= *Hevea Huberiana* Ducke 1929).

A form which differs from the type by the reduction of nearly all parts of the plant. The trees reach only a height of 3 to 8 m.; the leaves are in certain individuals much smaller than in the typical form; the flower buds are nearly constantly shorter; the discus of the staminate flowers buds are nearly constantly shorter; the discus of the staminate flowers has generally very long points, but one case was found in which these points were shorter; the anthers are more frequently 6 (5 or 7) in a single irregular verticil like *H. lutea*; the seeds are a third smaller and frequently more angulous.

I had previously taken this plant as a "good" species, but afterwards I have verified that it is nothing but a reduced form of *H. Benthamiana* growing in very poor soil. I found it in a swampy ground with secondary growth near the small streamlet of kilom. 2 of Estrada da Raiz, Manos. I collected material from 5

of these little trees and observed that some individuals approach the type more than others.

Our herbarium material, provenient from the above mentioned trees, has the numbers 20.604, 21.736, 21.737, 21.738 and 21.739. Ns. 21.737 and 21.739 have excessively small leaves, much smaller than ordinarily in this genus. N. 21.737 is still distinguished by the short discus lobes of the staminate flowers.

H. *Benthamiana* f. *subglabrifolia* Ducke.

A medium sized tree with slender trunc (not swollen at the base!); the leaflets are more lanceolate than in the typical or in any other form, they are glabrous when mature, but the young leaflets have a scarce whitish (not reddish!) pubescence beneath. The flowers have all the characteristics of those of the typical form, but I never observed more than 6 or 7 anthers in a flower. The sole tree I found grows in the "igapó" (swampy and inundable forest) along the Igarapé do Crespo near Manáos (21.744); it flowered abundantly in 1929 but did not fructify. Perhaps an hybrid (?)

In another tree (21.743), of the same local but much younger, the leaves have an intermediate form between the typical *Benthamiana* and the f. *subglabrifolia*. The lower surface of these leaves has some mixed white and reddish pubescence; the flowers have 6 to 8 stamina. This tree, as well as the precedent, has not fructified.

H. *Benthamiana* f. *caudata* Ducke.

The habitus of the tree resembles very much the typical *Benthamiana*, but the leaflets are more lanceolate, caudato-acuminate, with a whitish pubescence beneath which remembers *H. Spruceana*. The flower buds are very long acuminate; the discus of the staminate flowers has long laciniate lobes; the anthers are 7, in all the flowers I examined. Capsule not seen. Flooded woods ("igapó") of the lower Apuahú, tributary of the lower Rio Negro (21.740); a single tree, with the vernacular name "ser. torrada".

H. *Benthamiana* f. *obtusiloba* Ducke.

The trees of this form grow in the same "igapó" and have the same habitus and identic vernacular name as the precedent form, but differ by the very broad and shortly acuminate leaflets and by the short obtuse lobules of the discus the staminate flowers. The pubescence is equal to that of the precedent form; the number of anthers I found was 7 or 8. The capsule is unknown. I saw some individuals an collected herbarium material from two of these: Ns. 21.741 and 21.742.

The leaves of *obtusiloba*, by their ample form and whitish pubescence and the obtuse-lobate discus, remember the species *H. Spruceana*; the elongate and acuminate flower buds and the anthers are like these of the typical *Benthamiana*. This induces me to think that *obtusiloba* may possibly be an hybrid of the typical *H. Benthamiana* with *H. Spruceana*, both abundant in the same locality.

4. *Hevea rigidifolia* (Benth.) M. Arg.

I never found this specie, which, as it seems, was collected hitherto only a single time, by R. Spruce; I have, however, a photograph of the type, obtained from the Director of Kew Gardens. According to the descriptions, the specie differs from *H. Benthamiana* principally by its glabrous rigid coriaceous leaflets with recurvate margin; the discus and the anthers (6 to 10) do not seem to differ in any essential character from those of the typical *Benthamiana*. The fruit is unknown.

The type is a 30 feet high tree, discovered in the "catinga" woods (lower or opener forest in sandy soil) of the Uaupés, tributary of the upper Rio Negro, and collected never more. Huber (which saw the type in London) attributed to this specie an herbarium material (Herb. Amaz. Mus. Pará 7.026) I have collected in swampy forests near Barcellos, lower Rio Negro; this material, however, consists of twigs at the beginning of flowering stage and has very young leaves, too tender to estimate their consistence at mature age. Furthermore, the igapó-vegetation of Barcellos is excessively different from the "catinga" forest of the upper Rio Negro region, and it is rare to find a specie which is common to both formations.

5. *Hevea brasiliensis* M. Arg.

This specie is not more variable (*) than any other *Hevea*-species, and certainly less polymorphic than *guianensis*, *Benthamiana*, *Spruceana*, and, perhaps, *lutea*. The trees reach a normal height of 20-30 m. but sometimes 30-40 m., with cylindric stem; the leaves are not erect and have down-curved, glabrous, membranaceous, acuminate leaflets with duller and generally paler inferior surface; flowers whitish yellow, acuminate in the bud, the staminate ones with an insignificant discus and 10 anthers disposed in two regular verticils; the capsule and the seeds are relatively large. I do not wish to give here any more details on the characte-

(*) — According to Huber, the forms *latifolia* Ule and *angustifolia* Ule can merely represent two evolutionary phases of the same tree. *Var. acreana* Ule 1914 may correspond, I think, to the exuberant individuals of the same species which were frequently observed in the fertile soils of Acre Territory.

ristics of this specie, because many other authors have written over this matter.

The most usual vernacular names are: "seringueira branca" and "s. preta" (*) in Brazilian Amazonia, and "shiringa lejitima" in Perú and Bolivia. Among the numerous local names, given by the "seringueiros" (rubber collectors) at the time of rubbers highest value but actually forgotten in the great majority, the most known seems to be "ser. folha de maniva", in use in the Javary and Solimões regions. This specie is now nearly the sole rubber furnishing *Hevea*, and the only cultivated in plantations; its latex exceeds that of all other species in quality and in quantity.

The area of the spontaneous geographical distribution of *H. brasiliensis* comprehends the whole South of the hylaea, from the Ucayali to the Xingú basin, and the great Amazonian estuary with the lower courses of its affluents (as Jary, Tocantins etc.), from the mouth of Rio Pará as far as the Rio Amapá as northern limit. In the lower Amazon this specie occurs not in the "varzea" (lowland) forests along the great river, but remains a little distant southwards; in the upper Amazon, however, it is found on the southern and on the northern bank of the Solimões. The trees grow generally in the forests of the recent alluvion soils, inundable or not; in the regions between Rio Madeira and Xingú they occur, however, in hill forests.

Var. (forma?) subconcolor Ducke.

Like the typical form of the specie, but the leaflets nearly as much green beneath as above. Some trees of spontaneous growth in the forest along the Igarapé São João at the limit of the lowlands subject to the yearly inundation by the Solimões, near São Paulo de Olivença, 21.957 (floriferous and some seeds collected under the trees); cultivated trees in Porto Velho, Rio Madeira, coming from the neighbouring rubber forests (23.209, floriferous).

Var. (forma?) Randiana (Hub.) Pax.

A tree of unknown origin, cultivated in the garden of the Goeldi Museum in Pará (herbarium material: J. Huber, Herb. Amazon. 3.291, 7.250, 9.402). Differs from the typical *brasiliensis* by more lanceolate leaflets, by the glabrous ovary with a small style, and by its capsule which is usually smaller than that for the typical *brasiliensis*, having more prominent carpels which approach the form of *H. guianensis*. I am not able to decide whether it is an individual variety, or a race with hereditary characteristics, or

(*) — Neither Huber or myself observed any characteristic which will authorize any botanical distinction between the trees corresponding to these vernacular names.

an hybrid; it is, however, certainly not a "good" specie, because all its differential characteristics with relation to the common *brasiliensis* are already known as inconstant and valueless for specie-classification, in the whole genus *Hevea*. — We have in the Jardim Botânico young trees obtained from seeds of the typical *Randiana*-tree of Pará; these plants grow as rapidly and vigorously as the true *brasiliensis* under the same conditions, in contrast with all the other *Hevea* — species which are not so easily acclimatized in Rio de Janeiro.

6. *Hevea paludosa* Ule.

A 15 to 30 m. high tree (according to Ule); leaves in erect position (according to Huber which saw a photograph of a tree made by Ule), glabrous; inflorescences subglabrous; flower-pedicels longer than in any other species; buds of the staminate flowers "subacuminate" according to Ule, but constantly with obtuse point, their pubescence less dense; discus with relatively short, obtuse or acute, glandules; anthers 7 to 10, biverticillate; capsule (not mature) like that of *H. brasiliensis* but smaller; seeds unknown. The (young) leaves of the floriferous specimens distributed by Ule are small, obovato-lanceolate, but the older leaves have, according to Ule, much larger and broader leaflets.

Herbarium material: Iquitos (Perú), in swampy but not flooded ground, E. Ule 6.260. I have seen, in the same region, many young *Hevea* plants with erect leaves and elongate leaflets, which belong evidently to the present specie.

7. *Hevea humilior* Ducke.

Differs from *H. paludosa* by its lower stature (3 to 5 m.), the horizontal or reclinate leaves with oblong or elliptic-obovate leaflets of medium size (for the genus), the shorter pedicels, and the elongate lanceolate glandules of the discus of the staminate flowers. The anthers are nearly always 10, in two verticils. The capsule is of the size of that of *H. guianensis* but not so deeply sinuate between the carpels, and the seeds are a little longer in relation with their thickness, remembering the smaller ones of *H. Benthamiana*, in form and size of the dark spots.

Iquitos (Perú). I found many of little trees between the low secondary growth in a swampy but not flooded ground, at the periphery of the city where the route towards Morona-Cocha begins (20.602). Kuhlmann collected herbarium material in the same region (2.411). We ignore, however, if this specie can reach the size of a taller tree when growing in primary formations.

8. *Hevea viridis* Hub. (Plate II and plate III).

A scarcely medium sized tree with white latex. Differs from all the other species of this genus by the leaflets which are equally green and shining in both surfaces. These leaflets are membranaceous or (the oldest), in the maximum, subcoriaceous, entirely glabrous, oblong-obovate or elliptic-obovate, shortly acuminate; their position is horizontal or reclinate. The inflorescences are scarcely pubescent or subglabrous; the flowers are in the form, structure and indumentum, nearly like those of *H. pauciflora*. The capsule has the same form as in *H. brasiliensis* but does not exceed the dimensions of the larger capsule of *H. guianensis*; the seeds remember those of the reduced forms of *H. Benthamiana* but are more angulous. — Pax (l.c.) approaches *H. viridis* to *H. brasiliensis* to the point of supposing it a variety of this latter; *H. viridis*, however, is conspicuously different from all *Hevea*-species by the very shining lower surface of this leaflets (in *H. brasiliensis* var. *subconcolor* there exists always a visible difference from the two leaflets-surfaces, lesser evident in the colour than in the luster).

H. viridis has been observed hitherto in 4 localities remote from each other. The sterile specie-type was discovered by Huber in eastern Perú between the lower courses of the Ucayali and the Huallaga, where this specie is frequent, principally on the swampy banks of the Rio Yanayacu, tributary of the latter; a young plant was transported in 1898 by the same botanist to Pará and exists yet in the garden of the Goeldi Museum, having never flowered. The Peruvian vernacular name is, according to Huber, "puca shiringa". Many years afterwards, Huber obtained floriferous material provenient from Occidente, Rio Putumayo, Colombian Amazonia, coll. W. Fox, Herb. Amaz. Mus. Pará 11.844. The third locality is the "igapó" (swamp-wood) which accompanies a black water streamlet at the interior of Borba (lower Rio Madeira, State of Amazonas, Brazil) where I found some trees and obtained complete botanical material (21.961). The fourth, finally, is the Brazilian Upper Rio Negro where I observed many trees in the swampy "catinga"-regions of Camanáos, of the neighbourhood of the mouth of the Uaupés and along the Rio Curicuriary (floriferous samples collected in the first of these localities, 23.749).

9. *Hevea pauciflora* (Spruce ex Benth.) Muell. Arg. (*) = *Siphonia pauciflora* Spruce ex Benth., = *Hevea membranacea* Muell. Arg., = *Hevea confusa* Hemsl. (var.).

Widely spread, but not frequent everywhere through its geographic area; seems to be subdivided in varieties of very different

(*) — The type of *Siphonia pauciflora* and of *Hevea membranacea* is the same N.º 2.691 of R. Spruce; the name *pauciflora* has the priority.

aspect but which does not present any differential characteristics of specific value and shows a tendency for the production of transitional forms.

H. pauciflora *typica*, = *H. membranacea* Pax, inclusive var. *leiogyne* Ducke.

A rather tall tree with cylindric stem. Latex white. Adult leaves horizontal or a little reclinate; leaflets ample and with relatively long petioluli, even oldest, thin, membranaceous, glabrous in all ages. Inflorescences nearly glabrous; pedicels short; the staminate flowers obtuse in the bud, covered with dense white tomentum, having the glandules of the discus well developed, bifid or emarginate, and 10 anthers in two verticils; the pistillate flowers have a silky ovary (Spruce 2.691, the type specimen for *pauciflora* and *membranacea*) or a glabrous ovary (f. *leiogyne* Ducke, 21.962 (*)). Capsules generally nearly of the size of those of *H. brasiliensis* but with much deeper separate carpels (deeper than even in *H. Benthamiana*; seeds like those reproduced in Hemsley's (a) drawing under the name *H. confusa*, but slightly longer.

I do not know a special vernacular name for this "seringueira".

Geographic area (**): Upper Rio Negro (State Amazonas, Brazil), and Potaro River (Br. Guiana). Herbarium material: rainy-forest on some hills of the Upper Rio Negro-region: Morro de São Gabriel, 21.962 (floriferous and with semiadult capsules) and 21.963 (sterile young tree); Serra Cabary, northwest of São Gabriel, 23.753 (with adult capsules). Potario River, Br. Guiana, Jenman 7.404 (floriferous).

H. pauciflora var. (subspecies) *coriacea* n. nom., = *H. pauciflora* Pax, exp., = *H. membranacea* Ducke 1933.

Differs from *pauciflora* *typica* by the smaller size of all its parts, and by thicker adult leaves which are rigidly membranaceous or (in the "catinga"-vegetation of the Upper Rio Negro) hardly coriaceous. Generally a medium sized tree; the adult leaves have commonly a horizontal, sometimes in part a semierect position, with short petioluli and relatively narrow, rarely ample

(*) — "N.º 21.962, with glabrous ovary, agrees very well with Jenman 7.404 from the Potaro River, Br. Guiana, which also has a glabrous ovary and very similar foliage. The latter is cited by Pax in Engler Pflanzenreich as *H. membranacea*, and, except for the ovary, it agrees well with Spruce 2.691. It would seem to be a variety of *H. membranacea* with glabrous ovary". N. Y. Sandwith, letter of June 3d, 1931.

(**) — Ule 5.350, from Manaus, cited by Pax l.c. as *H. membranacea*, is *H. Spruceana* with glabrous leaves. Ule, himself, had, already, verified this (b, note 1: 17).

leaflets; the ovary is silky or glabrous (*); the capsule and the seeds are always smaller than in *pauciflora* typica but varie very much in their size (the seeds resemble often those of the drawing of Hemsley (a, under the name *pauciflora*).

This plant has not a definite vernacular name; it is sometimes called "seringueira da catinga" or "ser. itaúba-rana". The "seringueiros" (rubber extractors) have always rejected it.

Geographic area: Western part of the Rio Solimões and Brazilian Upper Rio Negro, frequent in humid "catanga" — woods chiefly along streamlets, sometimes also in the tall forest near catangas.

Herbarium material examined: Catinga-region of São Paulo de Olivença, Solimões river, 21.964 (floriferous, with very young leaves), 21.965 (floriferous, with adult leaves), 21.966 (with very young fruits), 23.629, 23.756 and 23.757 (with mature capsules and seeds (**)); catangas near Camanáos, Upper Rio Negro, 23.754 (floriferous) and 23.755 (with nearly adult fruits).

H. confusa Hemsley 1899, from British Guiana (Essequibo and Mazaruni) was afterwards (1901), by the same author, reincluded in *H. pauciflora*, from the same country. It is not, however, the typic *pauciflora* but approaches itself to the var *coriacea* by its rather coriaceous leaves, differing from this last by the more conspicuous pubescence of the inflorescences (in certain cases, also the leaflets have a very little pubescence beneath). I examined the following herbarium samples collected by Jenman: 7.577, 7.581, 7.618, 7.629 and 7.630, distributed under the name *confusa*, and 7.580, 7.582, 7.631 and 7.632, under that of *pauciflora*. Since I have never seen the trees in nature, I cannot decide if *confusa* must be maintained as a proper race (geographic variety), or if it must be considered better as a mere form of the var. *coriacea*.

10. *Hevea Spruceana* (Benth.) Muell. Arg., = *H. discolor* (Benth.) Muell. Arg., = *H. similis* Hemsley, var. or forma? — (Plate II and plate III).

Vernacular names: "seringueira barriguda" in its whole geographic area; "ser. tambaqui" in some points of the Rio Negro.

This specie is a medium sized tree and has a strongly swollen trunc-basis, at least when it grows in the deeply flooded "igapó",

(*) — "N.º 21.965 and 21.966 do not agree nearly so well with Spruce 2.691, since their leaflets are much stiffer and less membranous in texture, and somewhat less pruinose beneath. The leaflets of 21.965 and 21.966 agree with those of specimens cited by Pax as *H. pauciflora* (Benth.) Muell. Arg., but in that specie the ovary is normally glabrous. Perhaps, as Pax suggests the texture of the leaflets is not a character of specific value, and perhaps both forms may have glabrous and sericeous ovaries". N. Y. Sandwith, letter of June 3, 1931.

(**) — The seeds of 23.757 resemble those *H. guianensis* var. *occidentalis*. See the chapter on the hybrids between *Hevea*-species.

its normal habitat. It may be easily recognized by its relatively large flowers with a brown-red on brown-violet calyx-tube, not observed in any other specie (all others have unicolour whitish yellow or brownish yellow flowers); the staminate flower buds are more or less obtuse; the discus of these flowers is composed by 5 glandules or has 5 more or less obtuse lobules; the anthers are commonly 10, less frequently 7 to 9, in two verticils. The most specific characteristics are, however, the form of the capsule and its dehiscence. The capsule is voluminous, ellipsoid or more seldom nearly globose, not trigastic as in all the precedent species, on account of the absence of salient convex carpels; its pericarp is relatively thick and more suberous than fleshy; mature, it bursts less violently than in any precedent species and the seeds fall in the water under the tree, while the opened valves remain for a long time attached to the peduncle on the twig. The seeds are much larger and chiefly more elongate than in any other species, measuring, according to Huber, generally more than 35 mm. in the lenght, exceeding frequently 40 mm., while their width varies from one half to two thirds of the lenght, and the thickness is less than the half of the length. The aspect of the vegetative parts of this specie was very well characterized by J. Huber (e: 56): The principal distinctive of this specie are its thick twigs, the numerous pointed scales which cover the vegetative buds, the large and relatively broad leaflets pubescent underneath. The leaves have the pubescence sometimes generalized, sometimes only developed along the ribs; very rarely, they are entirely glabrous (in the plant described by Hemsley, and in a specimen conserved in the Jardim Botânico). The variability of the pubescence of the leaves and of the flower-size has been used to create the untenable specie *H. discolor*, but each author characterized it very differently; really, the pubescence varies in individuals of the same locality, and the size of the flowers is variable even between inflorescences of the same tree. The white latex is of bad quality and never utilized; the soft, whitish wood is employed in Manáos in boxes used in transport of the rubber produced by other *Hevea* species. This is a very common specie, sometimes occurring in societies, along the swampy and yearly overflooded banks of slow rivers and in shallow bays of lakes, with poor soil. Its geographic area comprehends the lower Amazon and the Solimões (the Brazilian part of the upper Amazon) with the lower courses of all their affluents, upwards to the cataracts or rapids (when these exist), reaching easternwards the Rio Maracá, a little tributary North of the mouth of the Amazon.

Material examined: State of Pará: Rio Maracá, Herb. Amaz. 591, coll. Guedes (leaflets pubescent, flowers large); Santarem, Spruce VII — 1850 (specimen with completely glabrous leaves and

large flowers), and H. J. B. R. 23.752 (with subglabrous leaflets); Obidos, Herb. Amaz. 3.653 coll. Le Cointe (leaflets scarcely pubescent, flowers large), and H. J. B. R. 10.547 (leaves densely pubescent, flowers smaller). State of Amazonas: Manáos 15.144 and 21.969 (the leaves of both specimens have hairs only on the ribs, the first has large flowers, the last has relatively small flowers), Herb. Amaz. 12.540 (leaflets pubescent enough, flowers large), Herb. Ule 5.350 (leaves entirely glabrous); Paraná de Anavilhana, lower Rio Negro, 21.967 (leaves enough pubescent, flowers large); Barcellos, Rio Negro, Herb. Amaz. 7.028 (leaflets only pilose on the nervures, flowers small); Maués, 21.968 (leaves pubescent enough, flowers relatively small); Tres Casas, lower Madeira river, 20.606 coll. Kuhlmann (as the precedent specimen); Lago de Teffé, Herb. Amaz. 7.409 (leaflets obovato-lanceolate, long acuminate, with hairs only on the ribs; flowers medium sized); mouth of Rio Içá, Herb. Amaz. 7.711 (leaves subglabrous, flowers small). The study of this material shows clearly that *H. discolor* is inadmissible, even as a variety!

Var. (forma?) similis (Hemsley) Ducke, with ovate and densely pubescent leaflets, belongs certainly to *H. Spruceana*. The flowers are very large in Hemsley's type, but relatively small in a plant attributed by Huber to *similis*; this plant has been collected by myself in the lower Japurá (Herb. Amaz. Mus. Pará 6.776) where its vernacular name was: "seringueira barriguda", the name well known everywhere of *H. Spruceana*.

Var. (forma) tridentata Huber. A single tree found near Barcellos, lower Rio Negro, with tridentate staminal column in the staminate flowers, and with well evolved staminodia in the pistillate flowers. This merely individual form is parallel with the form of *H. lutea* represented by our N. 21.749.

11. **Hevea minor** Hemsl., = **H. microphylla** Ule, inclusive var. **maior** Pax. (Plate I and plate II).

Vernacular names: "seringueira barriguda" or "seringueira tambaqui"; according to Ule also "seringueira sarapó".

A small, medium sized or rather high tree (5-20 m.) with swollen stem base; latex white. Leaves in reclinate or horizontal position, glabrous; the leaflets are small or mediocre, subconcolor and a little shining even on the lower surface, elongate and more or less lanceolate in young individuals, shorter and more ovate in old trees. Flowers pale yellowish, more elongate, narrower and more sharply acuminate in the bud than in every other species, the staminate flowers measuring up to 7 1/2 mm., the pistillate to 8 1/2 mm. in length; staminate flower with a discus of 5 ovate

and acuminate glandules, and with 10 anthers in 2 verticils; pistillate flower very different from those of all other species by its large campanulate torus which is broader than the base of the calyx and has a collar padded summit. Capsule relatively small, of an approximately tetraedric form, with acute or acuminate apex and flattened (not convex) carpels which have a more or less evident dorsal keel (often only two carpels are normally developed, the third being much smaller than the others and sterile); pericarp thin; endocarp (valves) much thinner than in any other species and of more coriaceous than ligneous consistence, and consequently opening with slow, not elastic, dehiscence, and without crack; the valves twist themselves and roll, and remain for a long time adherent to the peduncle, after of the seeds in the water. Seeds ovoid with tendence to indistinctly quadrangular, 20-25 mm. long, 12-15 mm. wide, with abundant dark spots.

This specie was created by Hemsley on a specimen collected by R. Spruce on the banks of the Cassiquiare, without flowers and with no mature capsule (the seeds are still white!) but sufficiently characterized by the form of the leaves and chiefly by the form, the consistence and the slow dehiscence of the capsule (see the half-opened capsule reproduced in Hemsley's work, a feature which would be impossible in the case of any other of known *Hevea* species).

H. minor has been observed hitherto on the swampy banks of the Cassiquiare, where Spruce collected the type of the specie (a fructiferous twig with unripe capsule), and in the western part of the lower Rio Negro where it is frequent in the swampy and periodically deeply flooded islands: Ilha Xibarú near São Joaquim, E. Ule 6.023, 6.024, 6.025 (I saw cotypes of Ule's *microphylla* and var. *maior*), fructiferous material, and A. Ducke H. J. B. R. 23.750 (floriferous specimens with young and ripe fruits). Collected also in a swamp near Barcellos, Herb. Amaz. Mus. Pará 7.027 (floriferous and with young capsules; this in the specimen mentioned in Huber's works). The trees flower in the end of the yearly inundation when the water in the "igapós" begins to decrease (July-August).

12. *Hevea camporum* Ducke. (Plate II).

A low shrub or a very small tree growing in open land. Unfortunately, the lack of flowers does not allow me to determine the place of this extraordinary specie in the system; the very small fruit (the unique known seed is 11 mm. long, 7 mm. broad, 6 mm. thick), however, characterizes it sufficiently. The very scarce botanical material was collected in the campos between the headwaters of the rivers Manicoré and Marmellos tributaries of the lo-

wer Madeira, by Mr. R. Monteiro da Costa, and is conserved in the herbarium of our Botanical Garden (H. J. B. R. 17.708).

INSUFFICIENTLY KNOWN SPECIES

H. nitida M. Arg.

I compared a leaf of the type which was obtained in Munich by our assistant mis M. Bandeira, due to the kindness of Professor Suessenguth. Thi leaf remembers, in the nearly equal colour of both surface, the leaves of *H. viridis* but is more coriaceous and has a different form. The lack of indication of the locality increases the difficulty of identification.

HYBRIDS

There has been much discussion about the interspecific hybrids of *Hevea*, based on mere speculation. Real hybrids of *H. brasiliensis* × *H. pauciflora* exist, however, in the Botanical Garden of Trinidad.

1. *H. Spruceana* × *H. brasiliensis*. I observed,, in plantations near Manáos and in the regions of Maués and of the lower Madeira, some *Hevea*-trees which look like, in the vegetative parts, individuals of *H. brasiliensis* f. *latifolia* with very exuberant foliage, but which have the flowers and part of the fruits similar to those of *H. Spruceana*. The stems resemble those of *H. brasiliensis*; the extremities of the twigs have the characteristic scales of *H. Spruceana*, but these are less numerous and early caduceous. The inflorescences are pseudo-terminal and very large, still larger than in *H. Spruceana*; the flowers are perfectly like those of *Spruceana*, in colour, size and internal structure, only the staminate flower buds are in certain individuals more acuminate. The capsules which I had seen in three trees (other trees did not fructify in spite of having flowered) are intermediate between the two species; the seeds have in one case the aspect of those of *Spruceana*, in the second case (N. 21.971) they have an intermediate form, and in the third case (N. 21.973) they approach those of *brasiliensis*. The latex of these trees is utilized as that of the true *brasiliensis* but I do not know if it is equally good. The herbarium samples I collected proceeds from: Manáos, Campo Experimental, trees provenient of the Rio Madeira, 21.973 (numerous und fructiferous) and 21.972 (with enormous inflorescences which have not fructified): Manáos, in a plantation near Flores, 23.751 (with very exuberant inflorescences but which have not fructified);

Maués, 21.970 (floriferous) and 21.971 (floriferous and fructiferous). I found various trees with unripe capsule in Borba, lower Madeira. A floriferous specimens provenient from Canumá (East of lower Madeira), coll. La Rue 127, carries a note "good seringueira".

2. *H. gracilis* Ducke 1930, = *H. Benthamiana* var. *Huberiana* x *H. guianensis* var. *marginata*.

The sole tree observed (now disappeared) grew in the igapó which accompanies the streamlet of kilometer 2 of the "Estrada da Raiz", near Manáos, where the two mentioned Heveas are represented by some individuals. During a long time I considered it as a "good" specie, but actually, having examined in the same country numerous trees of the two mentioned Heveas, I arrived to the conclusion that *H. gracilis* is nothing but an hybrid between the two.

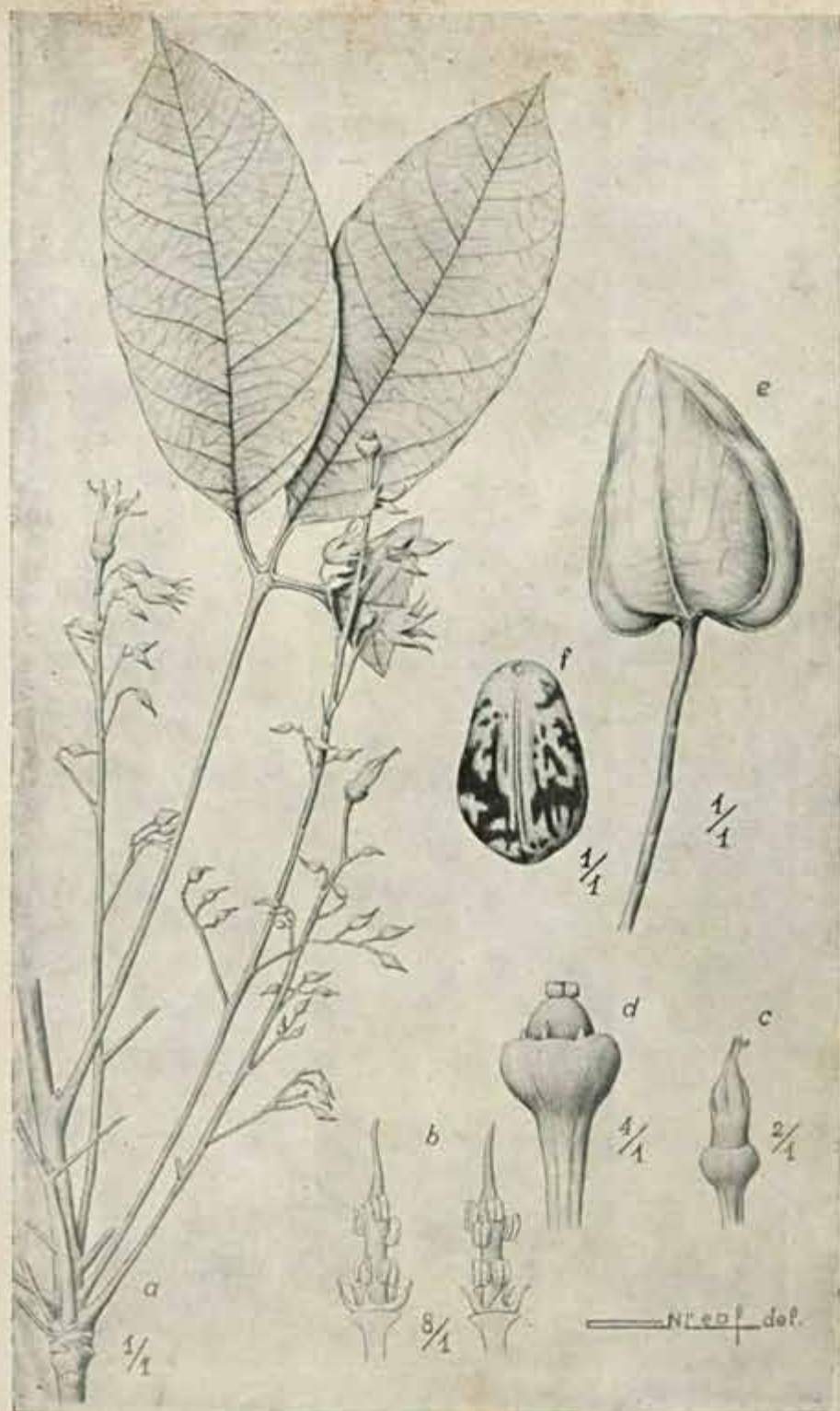
The only exemplar of *H. gracilis* was a slender tree 5 or 6 m. high, with erect leaves, small, lanceolate, coriaceous leaflets, marginate and hairy beneath; the staminate flowers are subglobose in the bud, they have 5 anthers forming an irregular verticil, and a well developed discus with 5 acute and shortly acuminate lobules; the capsule is a third smaller than the normally sized capsules of *H. guianensis* typica; the seeds, 14 to 16 mm. long. and 12 to 14 mm. broad and thick, have more numerous large spots but less numerous small lines. This plant distinguishes itself from the more reduced forms of *H. guianensis* var. *marginata*, besides the smaller dimensions of all its parts, by more lanceolate and evidently hairy leaflets, the very irregular anther verticil, the well developed discus of the staminate flowers, and the size, form and colour of the seeds; the pubescence of the leaflets, the discus and the dark coloured seeds approach it to *H. Benthamiana*. Our herbarium material has the number 20.599.

3. *H. Benthamiana* x *H. Spruceana*? I suspect that *H. Benthamiana* var. *obtusiloba* may be an hybrid between the two mentioned species, but I have not found capsules nor seeds.

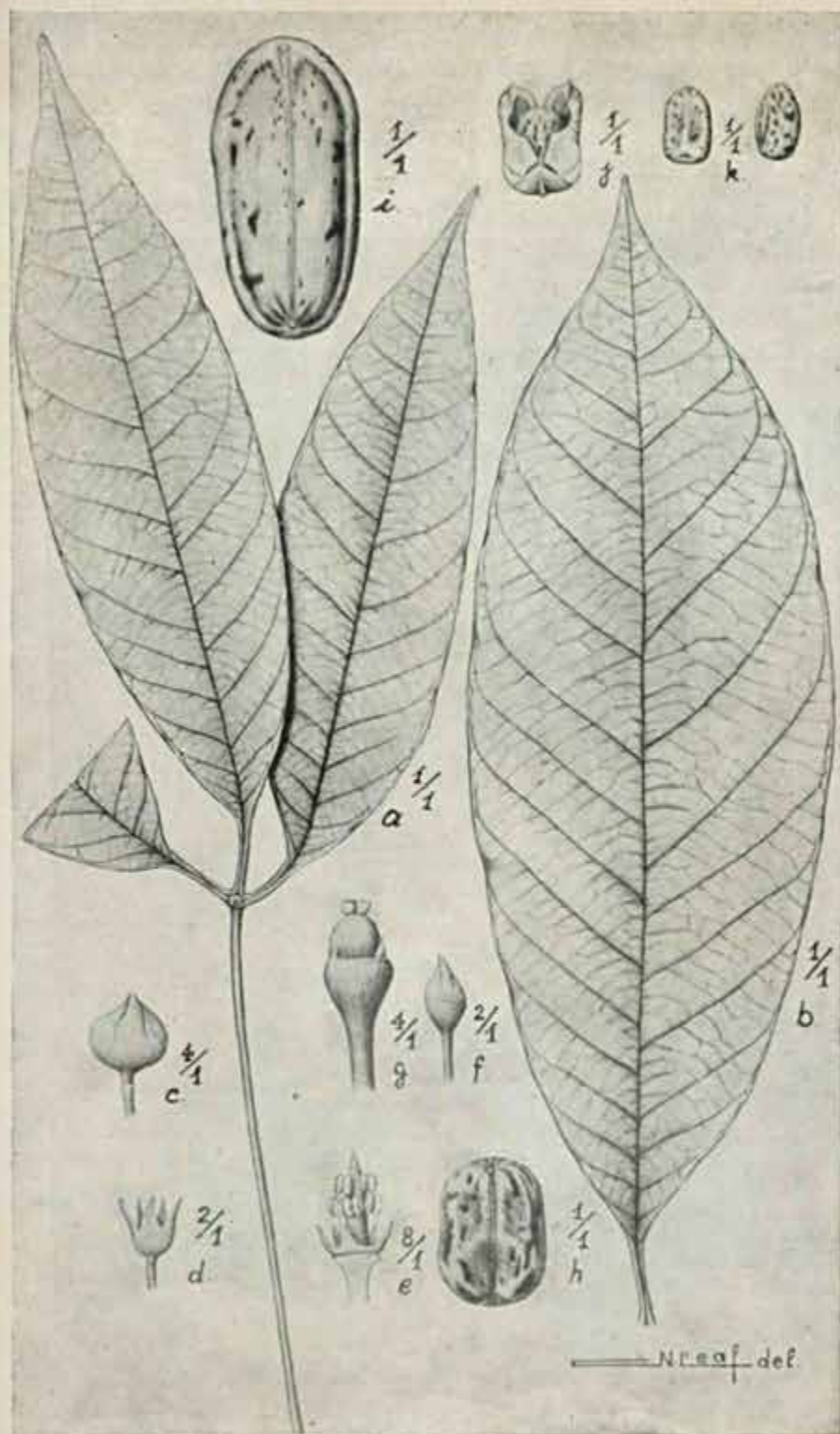
4. *H. pauciflora* var. *coriacea* x *H. guianensis* var. *occidentalis*? I observed near São Paulo de Olivença a fructiferous tree, entirely like the first specie but with seeds which resemble those of the second, in the form and in the colour (few but very large dark spots). This tree grows on the banks of a forest stream where both mentioned species are frequent. Herbarium samples have been distributed with the N. 23.757.

LITERATURE

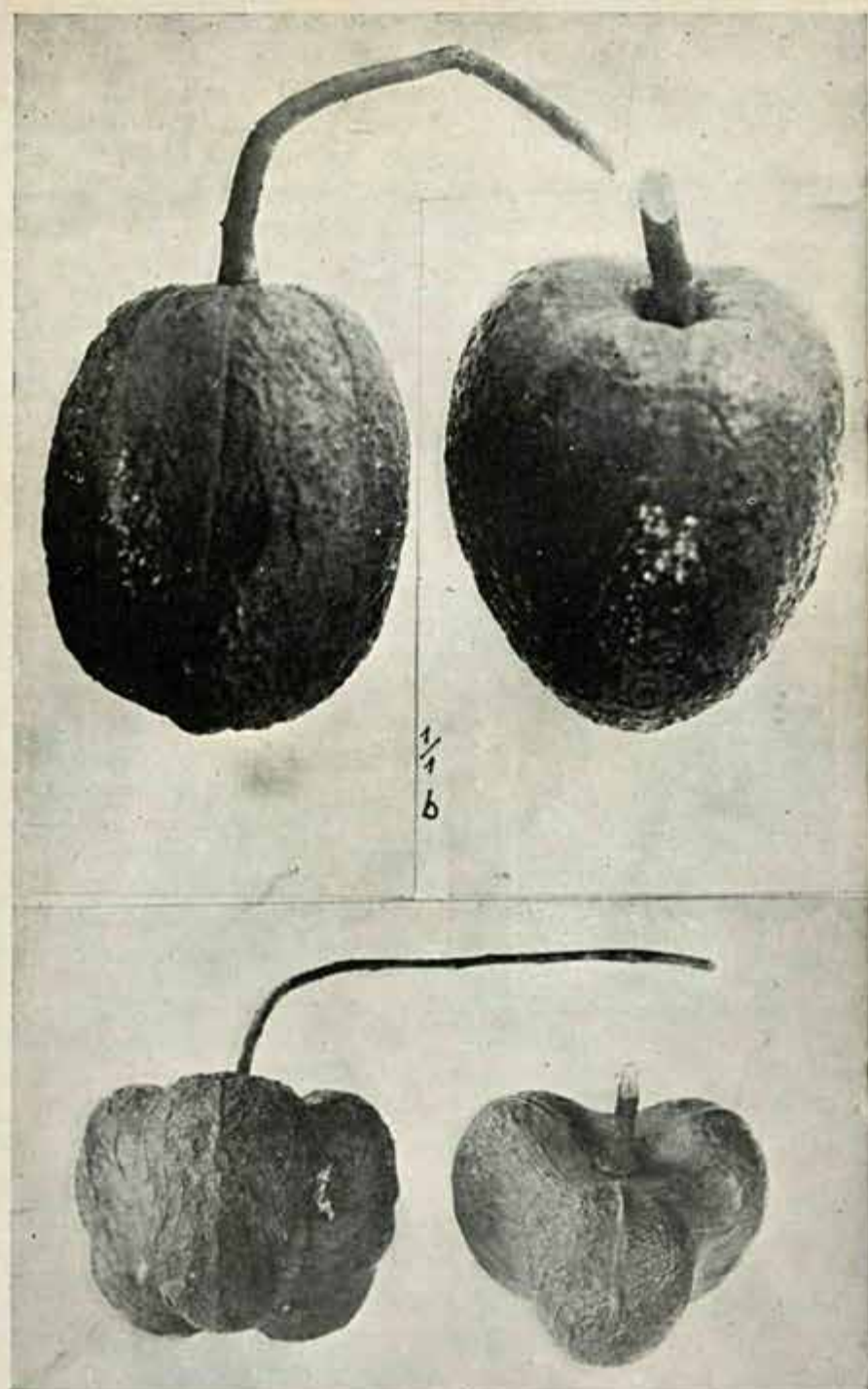
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Hevea minor: a) Floriferous twig; b) two male flowers without calyx; c) female flower bud; d) female flower after abscission of calyx; e) ripe capsule; f) seed. (N. Leal del.)



a) Another type of leaf of *H. minor*; b) a larger leaflet of *H. minor*. *Hevea viridis*; c) male flower bud; d) male flower opened; e) male flower without calyx; f) female flower bud; g) female flower after abscission of calyx; h) seed; i) seed of *H. Spruceana*; j) *H. camporum*, seed with a part of the capsule; k) two views of the seed. (N. Leal del.)



a $\frac{2}{3}$

a) two capsules of *H. viridis*; b) two capsules of *H. Spruceana*
(Photos H. Delforge)

UM NOVO GENERO DE DIPTERA ACALYPTRATÆ E
CONSIDERAÇÕES SOBRE A FAMILIA
CTENOSTYLIDÆ

(Com 9 figuras)

por

H. DE SOUZA LOPES

Revedo algum material colleccionado por Frei T. Borgmeier em Petropolis durante o anno de 1922, encontrei um interessante Diptero que logo me chamou a attenção por apresentar arista arborescente e aparelho buccal muito reduzido, e que a principio colloquei entre os *Pyrgotidae* pela sua semelhança com *Tauroscypson guiana* Curran, considerado como tal por esse autor. No entanto, a constituição do abdomen, que apresenta os segmentos terminaes do ovopositor muito delicados e retracteis, me fez duvidar de tal classificação. Seguindo a chave de Hendel (*Zweiflügler oder Diptera, Allgemeiner Teil, 1923*), cheguei a *Psilidae* pela presença de um adelgacamento de nervuras ao nivel da terminação da sub-costal, tendo encontrado entretanto varias differenças notaveis como a situação da nervura transversa da cellula cubital, a constituição do abdomen etc., que afastam o Diptero em questão desse grupo. Em Brues e Melander (*Classification of Insects, Bull. Mus. Comp. Zool. p. 322, 1932*) ha uma referencia á familia *Ctenostylidae* Bigot e tendo revisto a bibliographia sobre esse assumpto, resolvi fazer, no fim deste trabalho, algumas considerações sobre essa familia.

Disseccando o abdomen, encontrei numerosissimas larvas de 0,4 mm. que estavam muito bem conservadas e se prestaram para um estudo morphologico. Estas larvas estavam ainda dentro de ovos de tegumento finamente reticulado e, apresentam ganchos buccaes muito desenvolvidos, e fortes espinhos na face ventral, que levam a pensar que sejam parasitas.

Travassomyia, n. gen.

Este genero differe de *Tauroscypson* Curran pela formação da fronte anterior e pela nervação da aza.

Cabeça tão larga quanto o thorax, sem ocellos, aparelho bucal muito reduzido, antenas muito curtas e com arista arborescente. Azas com enfraquecimento da nervura costal na embocadura da sub-costal, que se adelgaça na parte distal; r1 e r4 + 5 com numerosos pellos em toda a extensão. Pernas muito alongadas. Abdomen dobrado para baixo pela redução dos esternitos. Larvas inteiramente segmentadas no utero.

Especie tipo: *Travassomyia borgmeieri*, n. sp. proveniente de Petropolis Brasil. T. Borgmeier leg. X. 1922.

O nome desse genero é dado em homenagem ao Prof. Lauro Travassos, que me iniciou no difficil estudo dos Dipteros e de quem continuo a receber valiosos ensinamentos.

Travassomyia borgmeieri, n. sp. (Figs. 1-9)

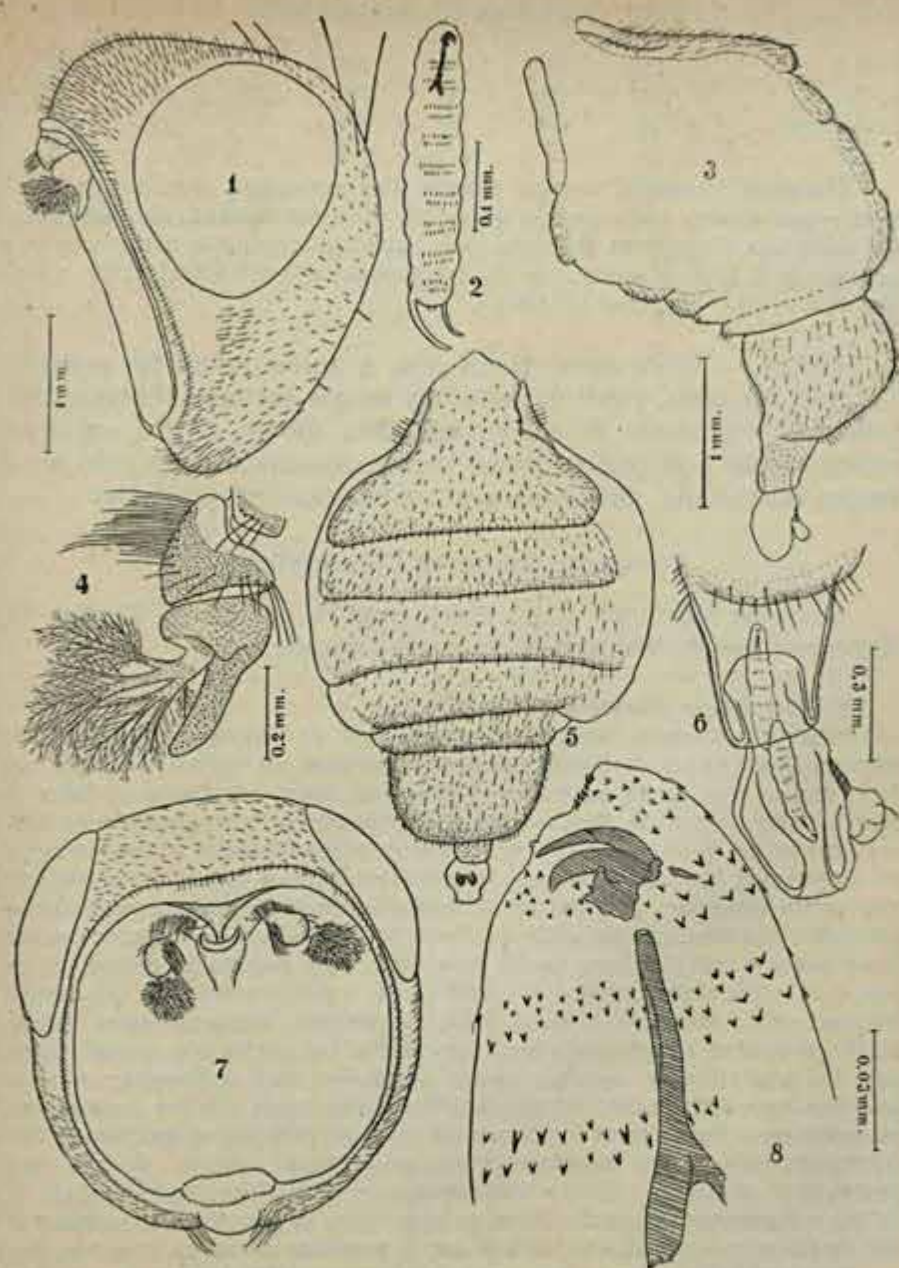
Comprimento total: 10 mm.

Cabeça intensamente vermelha com cerdas e pellos amarelos. A post-fronte mede, na parte mediana, cerca de metade da largura da cabeça; cerdas post-verticaes pequenas e proclinadas, vertical externa com cerca de 2/3 da vertical interna. Ha 3 cerdas orbitaes posteriores proclinadas e uma interior ao nivel da cerda orbital mediana. Sem ocellos. A fronte anterior é amarella, obliquamente dirigida, muito grande, quasi plana e mede na sua parte mediana cerca de 0,8 da largura da cabeça. Antenas amarellas, o 1º articulo é muito reduzido e tem numerosas cerdas na margem; o 2º tem fortes cerdas na face anterior e o 3º articulo é largo na metade basal e se torna estreito para o apice, terminando em ponta. Arista arborescente desde a base, não sendo perceptivel nenhuma segmentação.

Thorax vermelho, mesonotum coberto de pellos finos e amarelos que se tornam mais esparsos lateralmente, a proporção que se avizinham das pleuras. Ha uma cerda dorso-central prescutellar, uma notopleural, uma intralar e uma postalar; o callo humeral apresenta um pequeno tufo de pellos. No escutello ha 6 cerdas marginaes dirigidas para cima, na margem posterior, e 4 cerdas menores preapicaes. As pleuras têm pellos longos no centro da propleura, na parte posterior da mesopleura, no centro da pteropleura e na margem posterior e inferior da esternopleura.

Azas hyalinas com manchas escuras e amarelladas. A nervura costal é enfraquecida na terminação da sub-costal e termina exactamente em m1. As nervuras r1 e r4 + 5 apresentam em todo o seu comprimento, pellos em varias series, como acontece com a costal; todo o sector radial é avermelhado sendo a metade distal de r4 + 5 e r2 + 3 de coloração amarellada. A nervura m1 se curva fortemente para cima, de modo que r-m se reduz a um ponto. Balancins amarelos com a extremidade escura.

Pernas muito alongadas e estreitadas. Coxas, femures, e metade basal das tibias medias e posteriores vermelhos, o restante amarello com excepção da extremidade das unhas que é preta. Medida relativa dos articulos das pernas:



Travassomyia borgmeieri, n. gen., n. sp. (femea)

Fig. 1. Cabeça, vista lateralmente. — Fig. 2. Larva do 1º estadio, total. — Fig. 3. Abdomen, visto lateralmente. Fig. 4. Antenna. — Fig. 5. Abdomen, visto dorsalmente. — Fig. 6. Ovipositor. — Fig. 7. Cabeça, vista anteriormente. — Fig. 8. Larva, extremidade anterior. (H. S. Lopes del.)

	Femur	tibia	tarso 1	tarso 2	tarso 3	tarso 4	tarso 5
anteriores	115	140	60	40	25	12	15
medias	142	160	60	30	20	10	15
posteriores ...	140	150	60	35	20	12	15

Abdomen vermelho, tergitos e esternitos reduzidos, deixando lateralmente uma grande parte membranosa. Ha um estreitamento dos esternitos 3-6 tornando o abdomen dobrado para baixo; 7º segmento arredondado e grande; os 2 ultimos segmentos são membranosos e retracteis. Todo o abdomen é coberto de pellos amarellos.

Larva. — Mede cerca de 0,4 mm. e apresenta fortes ganchos buccaes. Ha duas series de espinhos longos na face ventral. Nos primeiros segmentos se encontram além destes, outros espinhos arredondados e dispostos menos juntos. No ultimo segmento ha 2 longos filamentos. Não consegui ver estigmas respiratorios.

CONSIDERAÇÕES SOBRE *Ctenostylidae*

Em 1850 Macquart (Dipt. Exot. Supl. 4, p. 167, pl. 25, fig. 1) descreve *Ctenostylum rufum* do modo seguinte:

“G. Cténostyle, *Ctenostylum*.

Ouverture buccale, trompe et palpes nuls ou cachés. Tête épaisse, hémisphérique. Face perpendiculaire, presque nue, au milieu, un sillon au fond duquel une petite carène se divisant en deux qui divergent dans le bas; un autre sillon de chaque côté pour recevoir les antennes. Joues descendant un peu plus bas que les yeux. Front presque linéaire ♂, peu saillant; un large sillon près des antennes; trois ocelles, l'un au vertex, les autres sur une petite élévation, au tiers de la longueur du front. Antennes courtes, couchées, ensérées sous la saillie du front; les deux premiers articles courts; troisième une fois plus long que le deuxième; style pectiné en dessus. Yeux nus, à facettes assez grandes. Thorax court, à peine aussi long que large; écusson petit. Abdomen à court pédicule; premier segment assez court, étroit; deuxième s'élargissant vers l'extrémité, les autres manquent. Pieds nus, un peu allongés, menus; cuisses amincies vers extrémité; jambes épaissies vers l'extrémité; tarsi antérieurs plus longs que les jambes, intermédiaires à peine aussi longs que les jambes; pelottes et crochet petits. Cuillerons nuls. Ailes: première cellule postérieure ouverte, élargie vers l'extrémité; première nervure transversale en regard de l'extrémité de la cellule médiastine; deuxième située au tiers entre la première et l'extrémité; cellule marginale paraissant divisée par des petites nervures transversales.

Nous rapportons ce nouveau genre à la tribu des *Æstrides* en considérant l'occlusion de la bouche et la nullité apparente au moins de la trompe et des palpes. De plus, nous lui avons observé quelques rapports avec le G. *Æstrus* (*Gastrus*, Meig.) par les sillons et les carènes de la face, par la brièveté des antennes et leur insertion sous la saillie du front, par l'absence des cuillerons et par les cellules des ailes dont la première postérieure est largement ouverte. Cependant ce genre se distingue des autres *Æstrides* par le style pectiné des antennes, par le corps nu, par le thorax court, par l'abdomen pétiolé, par les pieds menus; enfin les petites nervures qui tra-

versent la cellule marginale des ailes ne se retrouvent dans aucun autre Diptère, et rappellent seulement la réticulation dans les Némestrinides.

Le type de ce genre habite les bords du fleuve des Amazones. Nous ignorons ses moeurs, mais son organisation nous fait présumer qu'il est parasite comme les *Æstrides* dont il présente les principaux caractères; seulement les pieds assez longs et menus et les pelottes et crochets raccourcis des tarses ne paraissent pas propres à s'accrocher aux poils des animaux comme les autres *Æstrides*.

Ne nom générique exprime le style pectiné de ce singulier Diptère.

Ctenostylum rufum, Nob.

Rufa. Alis hyalinis limbo externo rufo. (Tab. 25, fig. 1).

Long. 4 l. ♂. Face et front luisants sur les parties saillantes. Pieds d'un fauve assez pâle. Ailes à bord fauve jusqu'à la nervure sous-marginale: les quatre dernières petites cellules de la marginales hyalines.

Des bords de l'Amazone. M. Bigot".

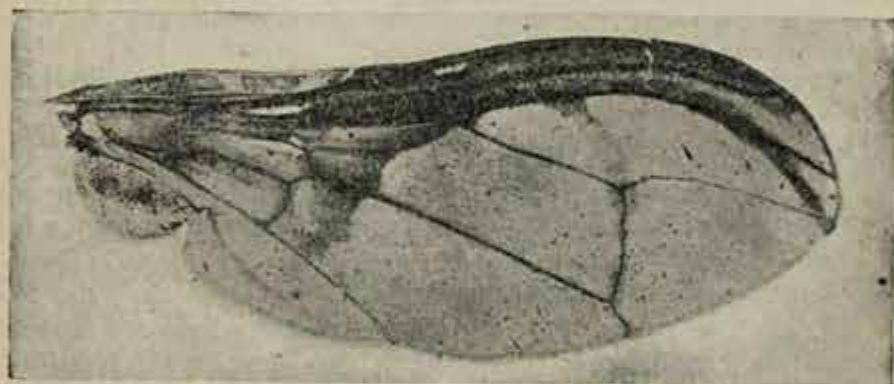


Fig. 9. Aza. (S. Lahera Photo)

Bigot em 1882 (Ann. Soc. Ent. Fr. p. 21) baseando-se no exemplar que Macquart lhe havia restituído creou uma nova familia que propoz collocar proximo dos *Conopidae* e acrescentou alguns caracteres á descripção da especie. E' a seguinte a comunicação de Bigot:

"Genre *Ctenostylum*.

"Parmi les matériaux, relativement considerables que j'eus autrefois la bonne fortune de communiquer à mon savant collègue Macquart, et à l'aide desquels il composa la majeure partie des derniers volumes (Suppléments) de son grand ouvrage "Diptères exotiques nouveaux ou peu connus", se trouvait un Diptère incomplet (c'est à dire, ayant l'abdomen mutilé), acquis avec d'autres des rives de l'Amazone, suivant l'indication des palletes; Macquart l'a nommé *Ctenostylum rufum* (loc. cit., 4^o Supl. 1850, p. 167, tab. 25, fig. 1), et classé, avec doute, chez les *Æstrides*.

Ce type excentrique figure encore dans ma collection: il présente à tout égards un grand intérêt, surtout en raison de sa conformation ambiguë.

En effect, l'atrophie apparente des organes buccaux semblerait le rapprocher des dites *Æstrides*, tandis que la pseudo-réticulation produite par les curieuses anastomoses de deux des nervures longitudinales externes tendrait à le faire assimiler aux Némestrinides? Mais, l'insertion manifestement dorsale d'un chete antennaire (vitteux seulement en dessus),

l'absence d'Empodium, l'atrophie des cuillerons, la présence de sept nervures longitudinales atteignant les bords de l'aile, parmi lesquelles la cinquième, non plus que les autres, ne sont coudées ni courbées en dehors, me portent à penser qu'il sera mieux à sa place auprès des *Conopidae* ou des *Myopidae*, dans une division nouvelle, créée exclusivement à son intention, et qu'en pourrait appeler: Tribu des *Ctenostylidae*? On retrouve, il est vrai, chez lui des quelques-uns des propres aux *Oestridae*, mais le faciès de ces derniers l'on éloigne absolument de plus, ils possèdent tous des cuillerons distincts.

La description de Macquart est incomplète, sa figure l'est pareillement: entre autres défauts, son dessin ne rend pas convenablement aspect anormal des nervures longitudinales extérieures précitées.

C'est pourquoi je crois utile de compléter et de rectifier comme il suit, le signalement de ce curieux insecte:

Alles: la troisième nervure longitudinale s'anastomose avec la costale par intermédiaire de 7 ou 8 petites nervures épaissées, formant ainsi 6 ou 7 cellules, dont la première et les 4 dernières semblent fenestrées vers leur milieu; ces fenestrations sont de forme ovale.

Thorax: une forte et courte épine légèrement recourbée se montre de chaque côté de l'angle postérieur du mesothorax".

F. Brauer em 1887 (Wien. Ent. Zeit. p. 75) contesta a criação de uma nova família e colloca *Ctenostylum* próximo dos generos *Cephalia* e *Michogaster* que hoje são considerados synonymos de *Setellia* (*Richardtiidae*).

"Nachträge zur Monographie der Oestriden.

Ad. pag. 51: Ueber die in der Familie *Oestridae* nur provisorisch untergebrachte Gattung *Ctenostylum* Bigot (Ann. Soc. Ent. Fr. Mai 1882, pag. 21, Dipt. Nouveaux 19, Part., Nr. XXX) seine Ansicht dahin ausgesprochen, dass sie zu den Myopiden oder Conopiden gestellt werden solle und eine eigene Familie oder Tribus: *Ctenostylidae* bilde. Mir scheint es wahrscheinlicher, dass diese Gattung in die Nähe von *Cephalia* und *Michogaster*, wohin auch Macquart's *Conopsidea* (Supl. 4, Taf. 27, f. 10) gehört, untergebracht werde sollte. Das Wiener Hofmuseum besitzt eine besondere, mit *Conopsidea* verwandte Gattung, die zwischen 1. Längs- und Randader und zwischen dieser und der 2. Längsader Spuren von Queradern und eine entwickelte Querader zeigt. Die Art sieht einer Papierwespe sehr ähnlich. Was Bigot über die Beziehungen zu *Nemestrina* sagt, habe ich bereits früher hervorgehoben und als überflüssig erklärt (Sitzb. d. k. Akad. d. Wiss. Wien 1 Abth., 1885, pg. 413). — Schiner stellte diese neue Gattung zu den Daciden. Die Aehnlichkeit mit Conopiden, welche ich, wie schon der Vergleich mit *Conopsidea* beweist, zugebe, ist aber dadurch merkwürdig, weil sie auch bei *Gastrophilus* von mir angegeben wurde. Von den Oestriden weicht aber wie Bigot und Gerstäcker schon angegeben, *Ctenostylum* durch den gänzlichen Mangel der Schüppchen ab."

Bigot em 1887 se refere a nota de Brauer, reaffirmando a sua opinião quanto á constituição da família:

Bull. Soc. Ent. Fr., Séance du 23 septembre 1887, p. CLVII.

"M. J. M. F. Bigot présente la note diptérologique suivante, relative au genre *Ctenostylum* (Macquart, Dipt. Exot., 4e Supl., 1850 p. 167): M. le prof. Brauer (Nachtrage z. Monograph. d. Oestriden, Wiener Ent. Zeit. 1887,

p. 75) pense que ce genre, des plus curieux, devrait être classé parmi les *Sepsidae*, préférablement au lieu que j'ai cru pouvoir lui assigner, en le considérant comme digne de former le type d'une division spéciale non loin des *Conopsidi* ou des *Myopidi*.

Je ne saurais me ranger à l'opinion du savant maître, opinion qui me semble uniquement basée sur le faciès (criterium bien souvent trompeur). Selon moi, l'absence ou l'atrophie des organes buccaux, la villosité toute particulière du chète antennal à la partie dorsale seulement, la conformation anormale des nervures longitudinales externes de l'aile, m'empêchent d'admettre cette assimilation. A mes yeux, ce type singulier mérite une place à part, et je ne vois pas où je pourrais la chercher ailleurs que là où je l'ai déjà proposée".

Brues et Melander em 1932 (Classification of Insects, Bull. Mus. Comp. Zool. p. 322) ao começar a chave de Acalyptatae, se refere, quando trata da família *Gastrophilidae*: "The enigmatical family *Ctenostylidae* erected by Bigot for *Ctenostylum* from the Amazon River differs in having the arista long plumose above, mesothorax with a short recurved bristle at each posterior angle and the marginal cell divided into six or seven small cells by thickened crossveins between the costa and the second vein. Bigot located the family near the *Conopidae* from which it differs in the widely open apical cell and atrophied mouthparts. Apparently the only specimens known were collected previous to 1850".

Curran em 1934 (Dipt. of Kartabo and Brit. Guiana, Bull. Amer. Mus. Nat. Hist. vol. 56, p. 419) descreve o género *Tauroscypson* que considera como *Pyrgotidae*. Esse género não apresenta ocellos, tem o aparelho buccal reduzido, antenas muito curtas, arista densamente plumosa na parte externa, ovipositor muito delgado, e sua espécie tipo *T. guiana* Curran, apresenta como *C. rufum* Macquart nervuras transversas entre a costal e r 2 + 3,

Travassomyia borgmeieri se assemelha muito a *T. guiana* Curran pela falta de ocellos, pelas antenas muito curtas, pelo aparelho buccal muito reduzido, e pela forma do abdomen.

Os poucos caracteres citados por Macquart e por Bigot não permitem uma conclusão definitiva sobre as afinidades desses tres generos. No entanto é bem possível que se chegue a demonstrar que elles representam uma família a parte ou, pelo menos, uma subfamília de *Pyrgotidae*.

**SOBRE O CYCLO EVOLUTIVO DE CHONOCEPHALUS
WANDOLLECK, E UMA NOVA ESPECIE DE MELALON-
CHA BRUES, ENDOPARASITA DE ABELHAS (DIPT.
PHORIDÆ)**

por

T. BORGMEIER

(Com 14 figuras e 1 estampa)

No presente trabalho communico alguns dados sobre o cyclo evolutivo de *Chonocephalus* e *Melaloncha*.

As especies de *Chonocephalus* são saprophagas e se desenvolvem em detritos organicos de origem vegetal ou animal. Diversas vezes, nos annos passados, apanhei material aqui no Rio e em São Paulo sobre mamão pôdre e carne em decomposição. Ultimamente, consegui obter todos os estadios evolutivos de ovo a adulto por criação em laboratorio.

Quanto á biologia das especies de *Melaloncha*, escrevi na minha revisão do genero o seguinte (1934, p. 168): "Os representantes deste genero sem duvida têm habitos parasiticos, segundo se conclue da morphologia do ovipositor." Esta supposição foi confirmada pelas recentes observações do snr. ANTONIO RONNA, da Estação de Apicultura de Deodoro, a cuja gentileza devo o material de alguns adultos e puparios que descrevo neste trabalho. Segundo verificou o snr. RONNA, as larvas se alojam no interior do thorax da abelha, onde tambem passam á pupa. Como o genero *Melaloncha* é exclusivamente neotropico, e *Apis* por outro lado um genero exotico, trata-se sem duvida de um caso de adaptação biologica. E' possivel que as especies de *Melaloncha* parasitem as nossas abelhas indigenas. O snr. RONNA opportunamente vae publicar o resultado de suas observações biologicas.

Chonocephalus Wandolleck

Wandolleck, 1898, Zool. Jahrb. Syst. vol. 11, p. 428, figs. — Schmitz, 1929, Revision der Phoriden, p. 168, figs.

No dia 11 de outubro deste anno, appareceu sobre a minha meza de trabalho, no laboratorio do Instituto de Biologia Vegetal, um phorideo aptero. Apanhando-o com um tubo de vidro, verifiquei ao microscopio tratar-se de uma femea de *Chonocephalus*. Visto que as femeas de phorideos apteros frequentemente são transportadas pelos machos, supuz tratar-se de uma femea fecundada. Colloquei-a numa ampolla de 50 cc. contendo 9 partes de Agar nutritivo e 1 parte de sôro normal de cavallo, segundo o methodo recentemente indicado por H. DE SOUZA LOPES (Rev. Entomologia, vol. 5, fasc. 4, 1935), afim de obter os estadios evolutivos até agora completamente desconhecidos. O resultado foi surpreendente. No dia seguinte já verifiquei a presença de diversos ovos; a femea morreu em 25 de outubro e deixou uma prole de mais de 200 descendentes, na maioria machos.

Para estudo da morphologia das larvas, alguns exemplares foram incluídos em tubos capillares segundo o methodo de LUTZ. Afim de evitar transparencia demasiada, utilizei-me de uma solução de phenol, alcool e agua, segundo a formula do dr. G. M. DE OLIVEIRA CASTRO, que deu optimos resultados.

A posição systematica de *Chonocephalus* é bastante enigmatica, segundo já notou SCHMITZ (1929). Infelizmente, a morphologia da larva e pupa não veiu resolver esta questão. A biologia dos phorideos e a morphologia dos estadios evolutivos é por demais desconhecida, de maneira que faltam as bases para um estudo comparativo.

A distincção das especies é difficillima. SCHMITZ (1929) fez um estudo minucioso dos caracteres distinctivos que me foi de grande utilidade. No Brasil devem existir muitas especies, segundo verifiquei examinando o abundante material que se accumulou na minha collecção no correr dos annos. Mesmo aqui no Rio de Janeiro deve haver mais de uma especie, pois entre muitas femeas apanhadas sobre mamão pôdre, ha alguns annos atraz, além da especie nova aqui descripta, encontrei exemplares de uma especie differente. Afim de evitar confusões, na seguinte descripção da especie nova, baseei-me exclusivamente sobre os exemplares criados em laboratorio.

Os typos das especies descriptas por diversos autores antes de SCHMITZ, deviam ser redescritos segundo os criterios indicados por esse autor (1929). Possuió na minha collecção um exemplar paratylo (femea) de *Chonocephalus buccatus* Mall., que apresenta nos bordos posteriores dos tergitos abdominaes 1-5 as mesmas manchas hyalinas circulares presentes em outras especies; no emtanto,

BRUES (1915) na sua chave afirma que ellas não existem em *buccatus*. — Dou uma lista das 18 especies descriptas até a presente data.

- 1) *Chonocephalus dorsalis*, Wandolleck, 1898 (genotipo) ♀ (Archipelago de Birmarck).
- 2) *Chonocephalus similis*, Brues, 1905, ♀ (India).
- 3) *Chonocephalus kiboshoensis*, Brues, 1907, ♀ (Africa).
- 4) *Chonocephalus mexicanus*, Silvestri, 1911, ♀ (Mexico).
- 5) *Chonocephalus depressus*, De Meijere, 1912, ♀ (Sumatra).
- 6) *Chonocephalus fletcheri*, Schmitz, 1912, ♀ (India).
- 7) *Chonocephalus buccatus*, Malloch, 1912, ♀ (Guatemala).
- 8) *Chonocephalus heymonsi*, Stobbe, 1913, ♀ (Surinam).
- 9) *Chonocephalus jamaicensis*, Brues, 1915, ♀ (Jamaica).
- 10) *Chonocephalus bentacaisei*, Abreu (Heterophora), 1921, ♂ (Las Palmas).
- 11) *Chonocephalus ecitophilus*, Borgmeier et Schmitz, 1923, ♀
- 12) *Chonocephalus dahli*, Schmitz, 1928, ♂ (Archipelago de Bismarck).
- 13) *Chonocephalus major*, Schmitz, 1928, ♂ (Ibidem).
- 14) *Chonocephalus palposus*, Schmitz, 1928, ♂ (Ibidem).
- 15) *Chonocephalus aduncus*, Schmitz, 1928, ♂ (Ibidem).
- 16) *Chonocephalus primus*, Schmitz, 1928, ♀ (Ibidem).
- 17) *Chonocephalus secundus*, Schmitz, 1928, ♀ (Ibidem).
- 18) *Chonocephalus tertius*, Schmitz, 1928, ♀ (Ibidem).

Chonocephalus punctifascia, n. sp. ♀♂ (Figs. 1-13; Est. 1, Fig. 1).

Esta especie é afim de *ecitophilus* Borgm. et Schmitz, mas as medidas relativas da cabeça e do thorax são diferentes e os olhos são ligeiramente maiores.

Femea. — Comprimento total 0.91 — 0.92 mm. Coloração do corpo em vida de um pardo bastante escuro.

A largura da cabeça atravez dos olhos é um pouco maior que o comprimento da fronte na linha mediana (56 : 47); largura frontal no bordo anterior 25; bordo anterior ligeiramente convexo para deante. Bordo posterior ligeiramente convexo no meio, nos lados ligeiramente concavo. Fronte com pubescencia esparsa, pêlos no bordo anterior ligeiramente mais compridos. Na margem superior das foveas antennaes ha 4 cerdas, das quaes a superior é a mais comprida; o tamanho dos outros diminúe progressivamente. Diametro transversal do terceiro articulo angennal 0.05 mm.; comprimento da arista 0.29 mm., arista pubescente. Olhos pubescentes, com cerca de 16 facetas. Genas com 5 cerdas, cujo comprimento diminúe progressivamente para deante. Palpos largos, achatados, com diversos pêlos e 1 cerda no aplice que é aproximadamente tão comprida como a primeira cerda na margem das foveas antennaes.

Thorax nos angulos posteriores um pouco menos largo que a cabeça (53 : 56), bordo anterior ligeiramente concavo, bordo posterior muito chan-

irado. O comprimento do thorax na linha mediana e a sua largura nos ângulos posteriores estão em proporção de 8 : 53.

Abdomen elliptico. O comprimento relativo dos tergitos na linha mediana é 65 (5) : 51 (10) : 47 (8) : 47 (8) : 47 (8) : 55; os algarismos entre parenthesis indicam o comprimento da zona descolorida incluindo o algarismo anterior; a parte anterior geralmente escondida debaixo do tergito precedente tambem está incluido nos algarismos indicados; esta zona transparece em exemplares esclarecidos e geralmente vae até a margem anterior da faixa escurecida no bordo posterior; na fig. 3 o bordo anterior do 2º tergito está indicado por pequenos traços, coincidindo o bordo anterior dos tergitos 3-6 com a margem anterior da faixa transversal. Tergitos 3-5 com distincta faixa transversal escurecida, cada uma com mais de 20 manchas hyalinas ligeiramente ovaes que apresentam um pêlo; no primeiro tergito, a faixa e as manchas são menos distinctas. Tergito 6 com 4 pêlos compridos no bordo posterior. Esternito do sexto segmento ligeiramente trapeziforme, tão comprido como largo posteriormente, com 4 pêlos prolongados no bordo posterior. Formação chitínosa em forma de estribo mais ou menos como em *ecitophilus*.

Patas amarello-pardacentas. Comprimento relativo da tibia e dos cinco articulos tarsaes nas patas anteriores = 38 : 15 : 8 : 7 : 7 : 10; nas patas médias = 41 : 16 : 8 : 7 : 7 : 10; nas patas posteriores = 55 : 28 : 10 : 9 : 7 : 10;. Fileiras longitudinaes de pêlos se acham na face ventral dos metatarsos I, II e III e nos art. tarsaes 2-3 das patas posteriores. Metatarso posterior com pentes transversaes; tambem na face posterior das tibias posteriores se acha uma fileira transversal de pequenas cerdinhas.

Macho. — Comprimento total 1.1 mm.

Coloração pardo-escura, fronte pardo-ennegrecida, angulos humeraes e a parte inferior das pleuras mais amarello-ferruginosas; em baixo da raiz alar uma mancha escura. Postscutello amarello-claro, metanoto amarello-pardo. Patas pardacentas, tibias médias esbranquiçadas. Balancins pardo-escuros.

Fronte com sulco mediano, mais ou menos tão comprida como larga entre os olhos. Triangulo ocellar grande. Ha 2 cerdas ocellares; no bordo vertical ha de cada lado 1 cerdinha fraca inclinada para a linha mediana. Margem das foveas antennaes de cada lado com 4-5 cerdinhas, das quaes a externa é a mais comprida, diminuindo o tamanho das outras progressivamente. A fronte é protraída no meio e separa as foveas antennaes. Terceiro articulo antennal ligeiramente conico, o diametro transversal mede cerca de 0.68 mm.; arista distinctamente pubescente. Palpos compridos e largos (quasi 3 vezes mais longos que largos), com 1 cerda mal diferenciada no apice e muitos pêlos. Olhos pubescentes.

No thorax ha 2 cerdas dorsocentraes. Mesopleuras em cima com alguns pêlinhos no bordo posterior. Escutello com 4 cerdas, sendo as posteriores muito aproximadas entre si, e as anteriores implantadas no disco perto da margem anterior.

Abdomen com 6 tergitos, sendo os tergitos 2-5 aproximadamente de comprimento igual, e o sexto quasi duas vezes mais comprido. Hypopygio de formação complicada. Parte superior larga e chata, de cada lado com muitos pêlos e cerdas curvados para dentro. Para estudo de detalhes, dissequei diversos exemplares, removendo os orgãos genitales internos que pela sua coloração preta difficultam sobremaneira a visibilidade das demais partes. A parte ventral apresenta no lado esquerdo um processo delgado provido de 2 pêlinhos no apice (fig. 12, p.); no lado direito, a parte ventral

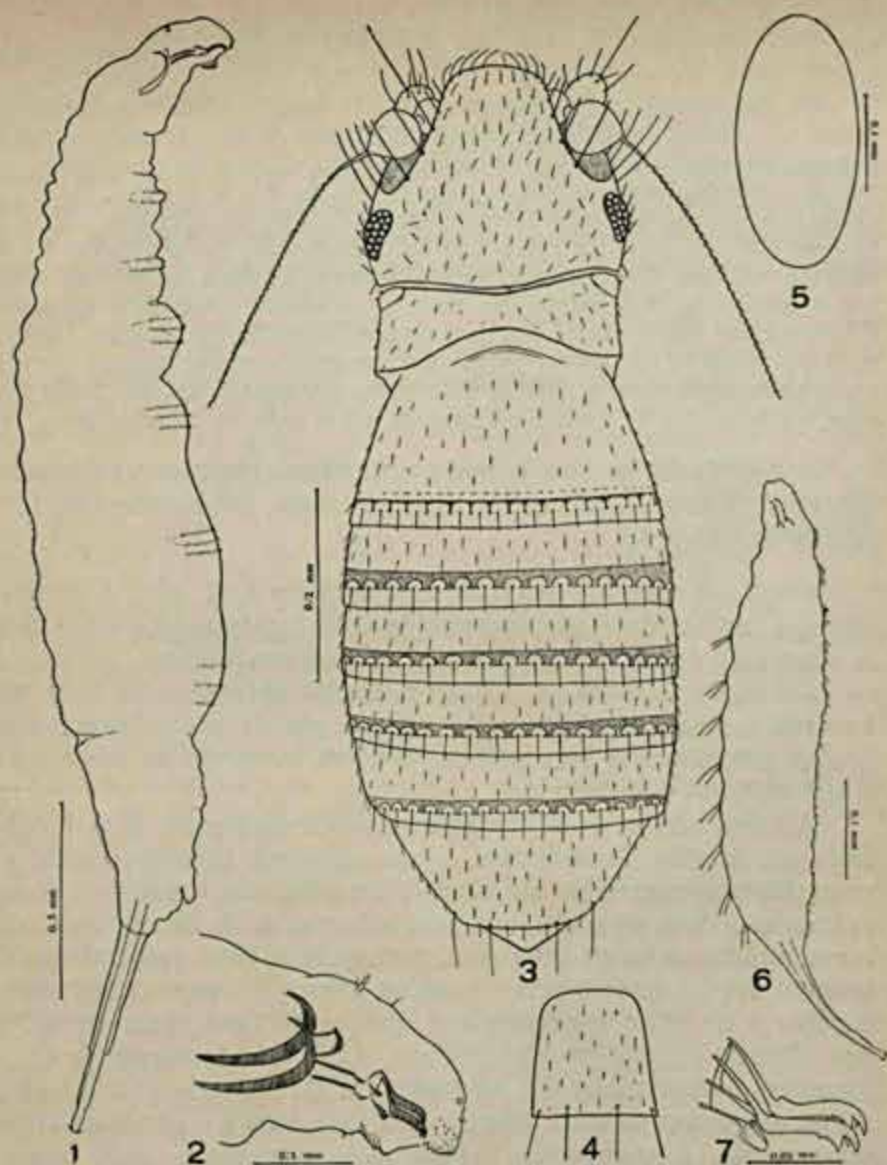
*Chonocephalus punctifascia*, n. sp.

Fig. 1. Larva adulta, vista lateral. — Fig. 2. Extremidade anterior da larva adulta, com o esqueleto pharyngeal. — Fig. 3. Femea, vista dorsal. — Fig. 4. Esternito do sexto segmento abdominal. — Fig. 5. Ovo. — Fig. 6. Larva do primeiro estadio, vista lateral. — Fig. 7. Ganchos buccaes da larva adulta, vista lateral. (Borgmeier del.)

mostra um processo dilatado no apice em forma de pé (fig. 13, p.; nesta figura, não se acha representado o lado esquerdo da parte ventral); logo acima ha um processo semelhante mas mais curto, que pertence á placa lateral direita da parte dorsal.

Asa distinctamente pardo-cinzenta, parte apical e toda a margem posterior de coloração mais clara; tambem ha uma faixa estreita mais clara entre as nervuras 5 e 6 e uma manchinha clara na base da quarta nervura. Terceira nervura mais escura e mais grossa do que a nervura costal, no apice com um engrossamento oval hyalino. Comprimento da asa 1.2 mm., largura 0.54 mm. Nervura costal 0.61 do comprimento da asa. Nervura mediastinal na base distincta, em seguida acompanhando a nervura subcostal até o meio, mas sem attingil-a. Nervura subcostal indistincta no apice. Cilios costaes muito finos. Nervura humeral-transversal ausente. Quarta nervura apagada no quarto basal, ligeiramente concava. Quinta nervura recta na metade basal e ligeiramente curva na metade apical. Sexta nervura em forma de S. Toda a margem da asa é rodeada de pêlos finos.

A descripção se baseia sobre numerosos exemplares femeas e machos, obtidos de cultura de uma só fema, em outubro de 1935, no Rio de Janeiro.

Ovo. — Comprimento 0,26 mm, largura 0,12 mm. A forma é elliptica, na extremidade anterior ás vezes ligeiramente attenuada. A superficie é lisa. Coloração amarello-esbranquiçada.

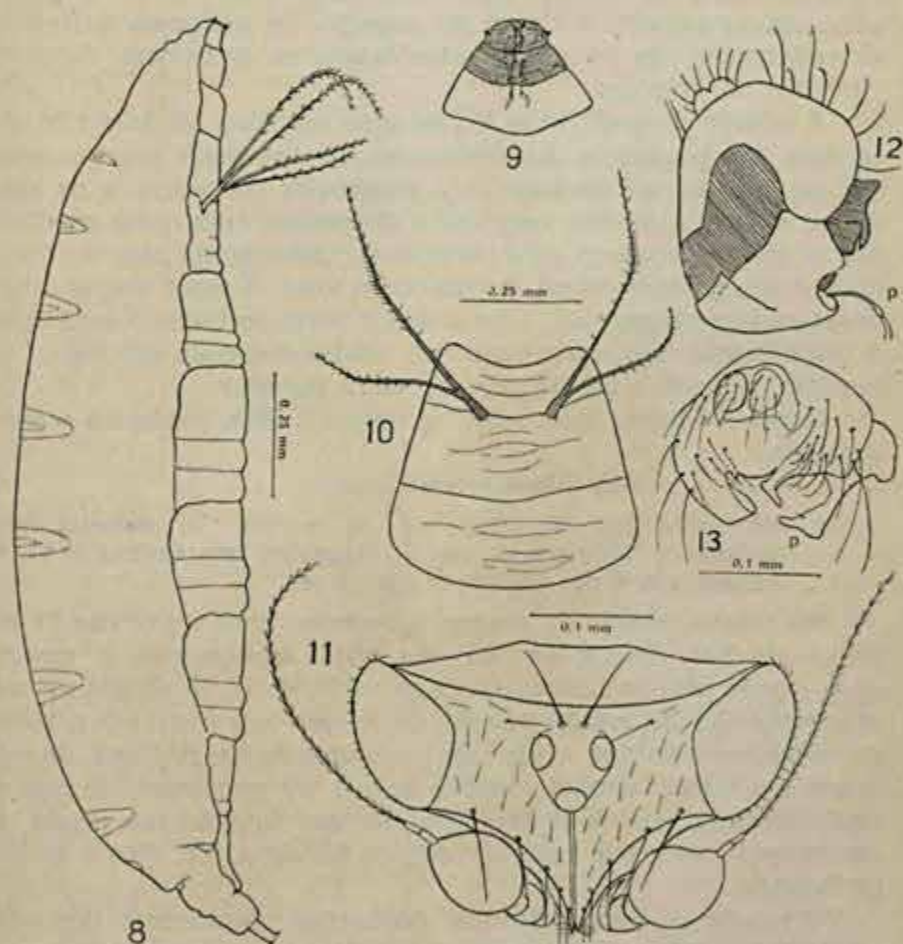
Larva. — A larva do primeiro estadio apresenta na face ventral nos segmentos abdominaes 1-6 um par de pêlos finos e compridos, difficilmente perceptíveis. O dorso é coberto de pêlos finos; a segmentação é indistincta.

A larva adulta é de côr amarello-esbranquiçada. Ella é achatada em sentido dorsoventral o que apparece principalmente em exemplares conservados em alcool; em vida ella é mais ou menos cylindrica; vista de perfil, ella tem a forma de S. Comprimento da larva adulta cerca de 2.25 mm, incluindo o tubo respiratorio extrahido até 2.8 mm; largura mais ou menos 0.5 mm. O tegumento é coberto de pêlos microscopicos, que se tornam mais compridos nos ultimos segmentos abdominaes. A larva se compõe de 11 segmentos, 3 thoracicos e 8 abdominaes. O ultimo segmento abdominal apresenta na face inferior o orificio anal e é prolongado posteriormente, formando um longo tubo respiratorio, cujo apice é provido de uma corôa de pêlos. Segmentos abdominaes 1-7 na face ventral com 3-4 fileiras transversaes de pêlos microscopicos. Não pude verificar o numero exacto das papillas que são muito finas e curtas. Nos segmentos thoracicos consegui vêr papillas em numero de 4. Provavelmente ha 4 no prothorax, 6 no mesothorax e no metathorax, e 8 em cada segmento abdominal. A segmentação da larva é indistincta. Cada segmento é dividido em tres rugas por dois sulcos transversaes. Antennas e palpos maxillares pequenos. Tambem o estigma prothoracico pouco saliente. Acima do orificio buccal ha muitas papillas sensoriaes. Os ganchos chitinosos do es-

queleto pharyngeal terminam anteriormente em tres dentes, dos quaes o exterior é continuado por uma serie de 5-6 denticulos.

As larvas em vida são bastante activas, movimentando-se geralmente perto da superficie do meio nutritivo. Duração do estadio larval 8 dias ou mais, conforme a temperatura.

Pupario. — Comprimento 2 mm, largura 0.5 mm. Coloração amarello-ferruginosa clara. No fim da nymphose, o adulto é visivel dentro do pupario por transparencia. O pupario tem a forma de canôa, sendo a extremidade posterior ligeiramente mais elevada



Chonocephalus punctifascia, n. sp.

Fig. 8. Pupario, vista lateral. — Fig. 9. Parte anterior do pupario que se destaca na eclosão; vista ventral. — Fig. 10. Placa dorsal que se destaca na eclosão. — Fig. 11. Cabeça do macho, vista dorsal. — Fig. 12. Hypopygio, visto do lado esquerdo e um pouco de frente; p, processo do lado esquerdo da parte ventral. — Fig. 13. Hypopygio, vista posterior; p, processo do lado direito da parte ventral (o lado esquerdo da parte ventral não foi desenhado). (Borgmeier del.)

do que a anterior. A face dorsal é relativamente chata, anteriormente um pouco declive para a frente, com a maior elevação entre os segmentos abdominaes 3 e 4. Os bordos lateraes não são aguçados mas arredondados. Face ventral muito abaulada em sentido transversal. Os cornos estigmaticos anteriores são de formação curiosa, até hoje não observada entre phorideos. Cada corno é bifurcado perto da base, apresentando dois galhos pubescentes, sendo o anterior mais comprido e curvado mais ou menos na extremidade do segundo terço. A extremidade apical do tubo respiratorio posterior da larva, o qual é retrahido para dentro do corpo antes da nymphose, é visível no pupario. Os estigmas anteriores só apparecem tres ou quatro dias depois da nymphose, faltando portanto na prepupa.

A eclosão do pupario se faz de uma maneira até hoje não observada nos phorideos. Anteriormente se desprende uma capsula que na face dorsal abrange os 3 segmentos thoracicos e na face dorsal os dois primeiros segmentos thoracicos (não pude verificar que se destaca tambem uma parte do metathorax na face ventral); além disso, na face dorsal se desprende *uma só placa* que abrange os segmentos abdominaes 1-2 e a maior parte do terceiro segmento. A placa dorsal frequentemente fica ainda levemente adherente ao pupario, sahindo o adulto pela abertura anterior.

O estadio pupal dura mais ou menos 8 dias, conforme a temperatura.

Melaloncha Brues

Brues, 1903, Trans. Am. Ent. Soc. vol. 29, p. 374. — Schmitz, 1929, Revision der Phoriden, p. 144. — Borgmeier, 1934, Revista de Entomologia, vol. 4, pp. 167-189, 13 figs., 1 est.

Na minha revisão do genero, apresentei uma chave das 21 especies até hoje descriptas, que são todas neotropicas. A especie nova criada pelo snr. RONNA de *Apis mellifica* L., já existia na minha collecção. Na minha revisão do genero referi-me sob o nome de *rubricornis* Borgm. a um casal proveniente do Itatiaya, de que descrevi a femea; a photographia da asa me convenceu de que se trata de uma especie distincta e identica áquella que recebi do snr. RONNA. A mesma especie recebi de Rio Claro (E. Rio) e do Rio de Janeiro.

O macho de Bom Retiro, S. Catharina, mencionado por mim em 1929 (p. 183), não pertence a *rubricornis*, mas com toda a probabilidade a *hirticauda* Borgm., cuja holotypo é proveniente da mesma localidade.

Melaloncha ronnai, n. sp. ♀♂ (Fig. 14; Est. 1, Figs. 2-3).

Dedico esta especie ao descobridor da sua biologia, snr. ANTONIO RONNA, da Estação de Apicultura do Ministerio da Agricultura em Deodoro (Districto Federal).

A espécie é extremamente affim de *rubricornis* Borgm., mas differe pela quarta nervura menos concava e a segunda divisão costal ligeiramente mais comprida. Talvez o descobrimento da fema de *rubricornis* venha a revelar mais diferenças.

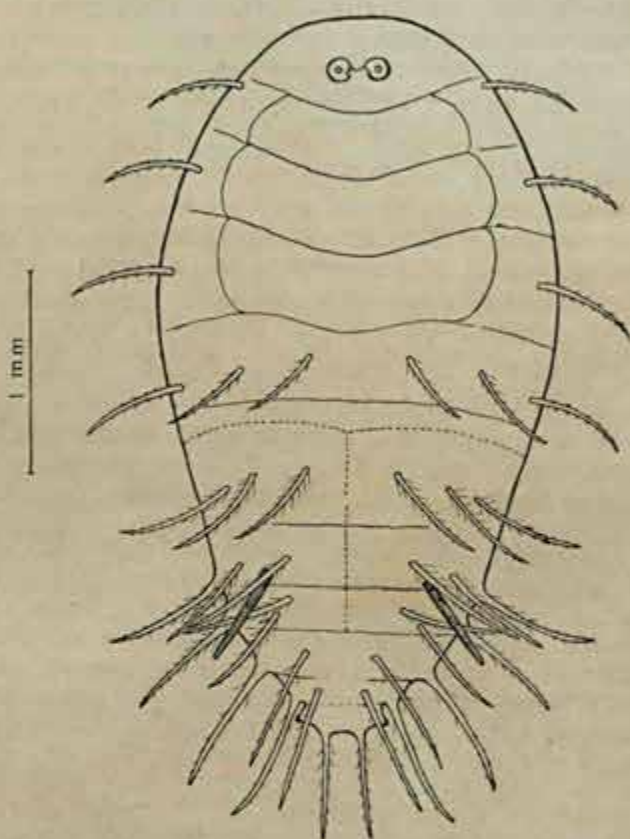


Fig. 14. *Melaloncha ronnai*, n. sp., pupario, vista dorsal.

Femea. — Fronte menos larga do que um terço da largura da cabeça, alaranjada, brilhante, com pubescencia fina e escassa; sulco frontal muito indistincto, quasi apagado. Cerdas preocellares fracas, implantadas no holotipo distinctamente em baixo do nivel do ocello anterior. Triangulo ocellar preto. Cilios oculares brancos. Palpos com pêlos brancos e 1 cerdinha preta apical. Terceiro articulo antennal comprido, conico alongado, amarello-esbranquiçado, metade apical avermelhada.

Thorax preto, brilhante, com 2 cerdas dorsocentraes; pleuras com tomento cinzento-azulado. A cerda superior das propleuras no exemplar holotipo se acha implantada no meio, a uma boa distancia dos angulos posteriores e do bordo superior; nos demais exemplares femeas e machos esta cerda se insere nos angulos supero-posteriores. Escutello com 2 cerdas e 2 pêlos.

Abdomen preto-avelludado, com manchas prateadas nos ângulos anteriores da parte dorsal dos tergitos e também nos ângulos anteriores da parte lateral. Sexto tergito no bordo anterior com uma faixa transversal prateada. Tergitos 1-5 com tufo de cerdas compridas, das quais 2 são sobresalientes. Segundo tergito pouco prolongado, 3-5 aproximadamente do mesmo comprimento, 6 muito prolongado. Pubescência do dorso muito fina e esparsa. Ovipositor preto, brilhante, curvado para baixo e atenuado para o ápice quando fechado (vide Rev. Ent. 1934, p. 173, fig. 5); lateralmente se notam alguns pêlinhos microscópicos muito curtos.

Patas amarelo-ferruginosas, tibia posterior com mancha apical ennegrecida. Tarso anterior ligeiramente dilatado, aproximadamente $\frac{4}{5}$ do comprimento da tibia. Metatarso anterior mais ou menos tão comprido como os dois seguintes artículos tarsais adicionados; quinto artículo prolongado e ligeiramente dilatado no ápice; pulvilli normaes. Todas as unhas são bifidas. Tibia média com 9 cílios posterodorsais; as fileiras irregulares de pêlos se reúnem com a fileira dorsal mais ou menos no meio. Tibia posterior com cerca de 12-13 cílios postero-dorsais, sendo os da metade basal fracos. Na face anterodorsal se acham 6-7 cílios fracos na metade basal. Fileiras irregulares acompanham a fileira dorsal em toda a sua extensão.

Asa com matizes amarelo-cinzentos, nervuras pardo-escuras. Comprimento 3 mm., largura 1 mm., nervura costal 0.537 do comprimento da asa, divisões costais em proporção de 7 : 8. Quarta nervura com concavidade anterior pouco accentuada pouco antes do meio, metade distal recta. Balancins amarelos.

Comprimento total 2.7-3.2 mm. (incluindo o ovipositor).

Macho. — Fronte não mais estreita do que na fêmea. Coloração do abdômen como na fêmea. Sexto tergito prolongado. Cerdas laterais dos tergitos (também existentes no sexto tergito) mais compridas que na fêmea. Hypopygio preto, brilhante, comprimido lateralmente; placa direita com pequena excavação no bordo inferior. Segmento anal amarelo. Tarso anterior muito abreviado, um pouco mais comprido que a metade da tibia. Metatarso I mais ou menos tão comprido como os dois seguintes artículos somados (em *rubricornis* um pouco menos comprido); último artículo mais dilatado que em *rubricornis*; os pulvilli são enormes, mais compridos que em *rubricornis*, alcançando quasi o dobro do comprimento do último artículo tarsal. Os pulvilli das patas II e III normaes. Todas as unhas simples.

Comprimento total do macho 2.7 — 3.1 mm.

Holotipo fêmea e allotipo macho de Deodoro, Districto Federal, A. RONNA, leg. 22-XI-1935, criados de *Apis mellifica* L. Paratipos 1 macho e 1 fêmea do Itatiaya, J. F. ZIKÁN leg. 20-V-1932, sobre flores de caboatá (*Cupania vernalis*); 1 macho e 1 fêmea de Rio Claro, Estado do Rio, 28-IX-1935, e 1 fêmea do Jardim Botânico, Rio de Janeiro, VIII-1934, H. DE SOUZA LOPES leg.

Pupario. — Comprimento 3.5 mm, maior largura 2 mm.

Coloração castanho-vermelha escura, na maior parte brilhante, face dorsal pontuada e mate até o quarto segmento abdominal inclusive. A forma é oval (com vista dorsal), a metade posterior é bojuda e dilatada, na face ventral muito abaulada em sentido transversal. A metade anterior da face dorsal é convexa (a maior elevação se acha mais ou menos no quarto segmento abdominal);

a metade posterior (segmentos abdominaes 5-8) é deprimida e excavada. Vista de perfil, a face ventral é convexa posteriormente e anteriormente concava, de maneira que todo o perfil forma um S. Margens lateraes da face dorsal arredondadas, não aguçadas. O tegumento é coberto de uma pubescencia fina lanuginosa, que falta na parte dorsal dos tergitos abdominaes 5-8. Todos os segmentos thoracicos e abdominaes (com excepção do ultimo) apresentam no dorso ou nos lados processos compridos pubescentes; no primeiro segmento thoracico ha 2, no segundo ha 4 (dois lateraes e dois dorsaes), no terceiro ha tambem 4; na face ventral os segmentos thoracicos 2 e 3 possuem ainda um par de processos menos compridos e mais finos. Segmentos abdominaes 1-4 com 6 processos (3 de cada lado) na face dorsal; segmentos abdominaes 5-7 de cada lado com 1 processo. Entre os segmentos abdominaes 2 e 3 se acham os cornos estigmaticos. Na face dorsal do ultimo segmento se encontram os espiraculos posteriores, que têm forma circular. A descripção se baseia sobre 3 exemplares.

A eclosão secca do pupario se faz como em *Megaselia*. Anteriormente se desprende uma capsula abrangendo na face dorsal os segmentos thoracicos 1-3, e na face ventral os dois primeiros segmentos e uma estreita faixa do terceiro segmento. Além disso, se destacam na face dorsal duas plaquinhas lateraes dos segmentos abdominaes 1-2 e a maior parte do terceiro segmento abdominal.

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CERCOSPORAE DE MINAS GERAES

ARQ. INST. BIOL. VEGET. RIO DE JANEIRO, vol. 1 : n. 3 : p. 213-220
1935

Errata

- P. 214 — em vez de — Hab. *Adenocalymma bullatum*
leia-se — Hab. *Pyrostegia venusta*
- P. 218 — em vez de — *C. minima* Tracy + Earle. BULL. TOR.
BOT. CLUB 23 : 1896
leia-se — *C. mali* E. + E. JOUR. MYC. 4 : 113-118
1888.
- P. 219 — em vez de — Hab. *Polygonum*
leia-se — Hab. *Persicaria*
- P. 219 — em vez de — Hab. *Euphorbiaceae*
leia-se — Hab. *Croton floribundus*

ALBERT S. MÜLLER.

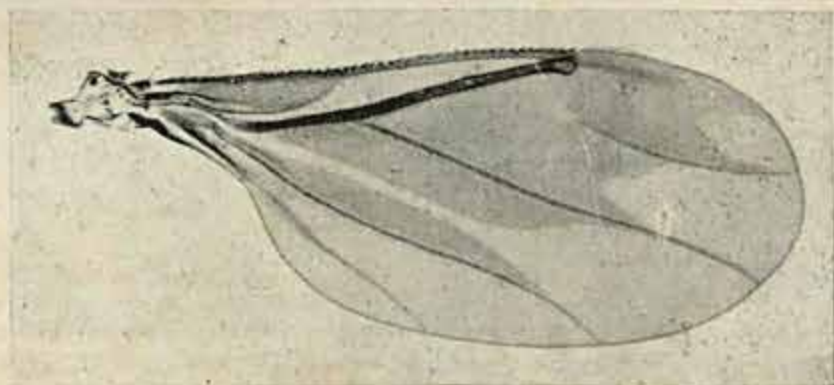


Fig. 1. *Chonocephalus punctifascia*, n. sp., asa (Typo). (J. Barbosa photo.)

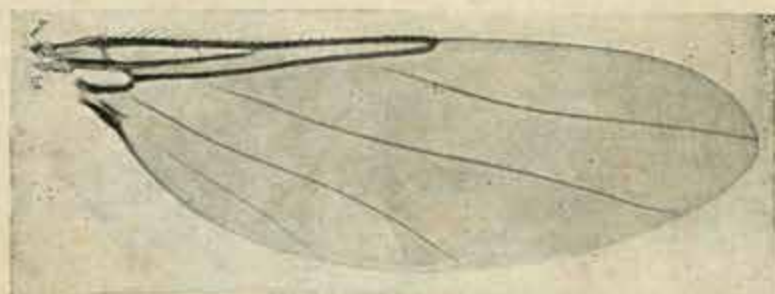


Fig. 2. *Melaloncha ronnai*, n. sp., asa da femea (Holotypo)
(J. Barbosa photo.)

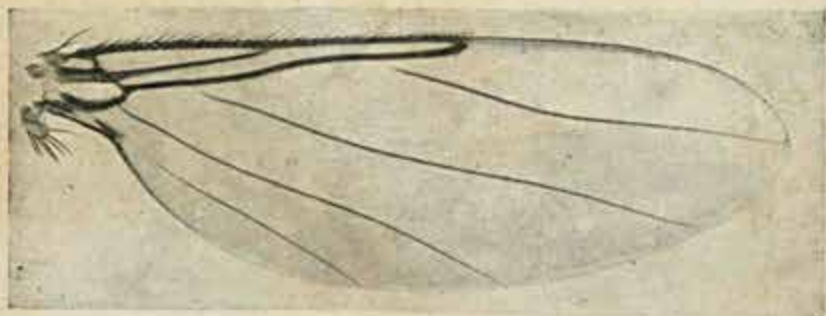


Fig. 3. *Melaloncha ronnai*, n. sp., asa do macho (paratypo do Itatiaia)
(S. Lahera photo.)

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