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TIBOUCHINA ERYTHROPHYLLA Gl. sp. nov. § *Pseudopterolepis*: caules diffusi prostrati ramosi gracillimi, juventute acute 4-angulati, demum subteretes, ad angulos sparse pubescentes pilis curvato-adscendentibus fere 1 mm. longis, nodis saepe setosis, internodiis ramorum brevissimis; petioli 2--3 mm. longi; laminae firmae ovatae, saepe circ. 8 mm. longae et 4 mm. latae, maximae 11 mm. longae 6 mm. latae, acutae vel subacuminatae, integrae, basi late cuneatae, 5-pli-nerviae, subtus glabrae rubrae, supra dense albo-villosulae, venae et venulae obsoletae; flores 4-meri pauci solitarii ramos laterales terminantes; pedicelli 1 cm. longi; hypanthium obconicum 3.8 mm. longum angustissime 4-alatum, costis intermediis 4 obscuris, inter alas glabrum et ad alas tenuiter pubescens pilis adscendentibus 0.3 mm. longis; sepala suberecta triangulari-ovata 1.6 mm. longa 1.3 mm. lata 1-nervia dense ciliata, seta terminali rigida 2 mm. longa, setis basalibus et intersepalinis paucis, 0.2--1 mm. longis; petala non visa; stamina isomorphia sed inaequalia; filamenta glabra, 1.8 vel 1.5 mm. longa; antherae fere rectae lineares 3.3 vel 2.2 mm. longae; connectiva 0.8 vel 0.6 mm. longa lobis basalibus minutis rotundatis; ovarium liberum ellipsoideum 4-loculare 3 mm. longum summo setosum; stylus rectus glaber 7 mm. longus stigmae punctiformi.

Type, Standley & Valerio 49048, collected at Yerba Buena, northeast of San Isidro, Prov. de Heredia, Costa Rica, alt. about 2000 m., deposited in the United States National Herbarium (1305867). Standley & Valerio 50110, of the same locality and date, is identical. Tibouchina erythrophylla is one of a small group of Central American species of which T. Oerstedii (Triana) Cogn. is best known. It differs from the other two species of the group in its very small flowers and its leaves red and glabrous beneath. It is further differentiated from T. Oerstedii by its short and broad sepals.

Tibouchina nana (Standley) Gl. comb. nov.

Chaetolepis nana Standley, Field Mus. Pub. Bot. 4: 247. 1929
Tibouchina Oerstedii var. subsessiliflora Cogn. Monogr. Phan. 7: 269. 1891.

The types specimens of the two synonyms are identical. It is easily distinguished from the related T. Oerstedii by the short sepals and dimorphic hairs on the leaves. Both are separated from T. erythrophylla, described above, by their pubescent foliage.

TIBOUCHINA OLIGANTHA Gl. sp. nov. § Diotantha: frutex; rami superiores gracillimi juventute complanati, sparsissime strigosi, pilis 0.3 mm. longis; petioli graciles 8--15 mm. longi minute sed quam rami densius strigillosi; laminae late ovato-oblongae vel ellipticae usque ad 60 mm. longae 40 mm. latae (superiores minores), abrupte et breviter acuminatae, margine ciliato-serrulatae, inferne late rotundatae ad basin imam acutatam, 5-7-nerviae, supra scaberulae, pilis adpressis ad dimidium adnatis, parte libera circiter 0.5 mm. longa, subtus ad venas primarias sparse strigosae pilis 0.4 mm. longis, ad paginam glabrae; venae primariae supra fere planae, jugis intermediis brevissime connatis, subtus elevatis; venae secundariae obscurae flexuosae; inflorescentia terminalis trichotoma pauciflora fere glabra; cymulae 3-florae et in quaque cymula flores laterales bracteis 2 caducis late rotundatis 3 mm. longis membranaceis ciliatis involu-crati; flores 5-meri; hypanthium campanulatum 5 mm. longum scabro-strigosum pilis subulatis albidis ca. 0.8 mm. longis; sepala oblonga, dense ciliata, 5 mm. longa basi 1.8 mm. lata, ciliis arcuato-adscendentibus 0.5 mm. longis, in linea centrali sicut hypanthium strigosa; petala cuneato-obovata 14 mm. longa 8.5 mm. lata superne glanduloso-ciliata, ut videtur flava; filamenta glabra; antherae subulatae, 6 vel 4 mm. longae, connectivis 2.4 vel 1.2 mm. longis basi in lobos 2 rotundatos dilatatis; stylus glaber 12 mm. longus.

Type, Steinbach 8262, collected at Samaipata, Dept. Santa Cruz, Bolivia, alt. 2200 m., and deposited at the New York Botanical Garden. Under the artificial arrangement of the species in Cogniaux' Monograph, T. oligantha may be placed next to T. latifolia (Naud.) Britt. The latter differs from ours in its narrower leaves and much smaller and more numerous flowers.

TIBOUCHINA VENOSA Gl. sp. nov. § Diotantha: frutex; rami minores tenuissime et adpresse pubescentes mox glabrati obscure 4-angulati, internodiis majoribus usque ad 6 cm. longis; petioli 5--10 mm. longi, sparse adpresseque setosi; laminae foliorum lanceolatae, maximae quae suppetunt 50 mm. longae 17 mm. latae in ramulis lateralibus, verisimiliter in ramis usque ad 100 mm. longae et certe 35 mm. latae, acuminatae, integrae vel minutissime serrulatae, tenuiter ciliatae setis 0.3 mm. longis, basi acutae saepe paullo inaequilatae, 7-phi-nerviae, jugo exteriori foliorum minorum saepe marginali, supra pubescentes pilis adscendentibus gracilibus 0.3--0.5 mm. longis basi vix adnatis, subtus in pagina glabrae ad venas venulasque tenuissime minutissime adpresso-setosae pilis 0.1--0.3 mm. longis; costae supra impressae subtus elevatae, venae secundariae supra obsoletae subtus obscurae planae flexuosae. Cymae pauciflorae axillares et ter-

minales in ramulis lateralibus paniculas parvas formantes, ultra internodia saepe et in pedicellis semper sparse glanduloso-pilosae; bractee caducae sessiles rotundatae 6 mm. longae; flores 5-meri; hypanthium late campanulatum vel subhemisphaericum, 3.7 mm. longum, sparse glanduloso-setosum, pilis 0.6 mm. longis arcuato-adscendentibus; sepala anguste oblongo-triangularia 2.7 mm. longa ciliata, sinus rotundatis; petala obovata circiter 12 mm. longa (flava?); filamenta glabra 6 vel 5 mm. longa; antherae subulatae leviter arcuatae 5.5 vel 4 mm. longae, connectivis subteretibus 2 vel 1 mm. longis infra insertionem filamenti in lobos 2 rotundatos dilatatis.

Type, Steinbach 8509, collected at Comarapa, Dept. Santa Cruz, Bolivia, alt. 2500 m., and deposited in the Gray Herbarium. T. venosa is apparently most nearly related to T. citrina (Naud.) Cogn., in which the leaves are notably wider and more sharply acuminate and the flowers less than half as large.

TIBOUCHINA SAXOSA Gl. sp. nov. § Pseudopterolepis: frutex ramis superioribus gracilibus elongatis rectis castaneis subteretibus, juventute dense adpresso-pilosis, demum glabrescentibus, cortice longitudinaliter fisso; internodiis majoribus 4--8 cm. longis, in ramis floriferis multo brevioribus; petioli dense adpresse setosi usque ad 1 cm. longi; laminae foliorum oblongo-lanceolatae usque ad 45 mm. longae 17 mm. latae acuminatae integrae basi acutae vel fere obtusae, 5-nerviae, supra dense pilosae, pilis subadpressis, basi vix adnatis, usque ad 1 mm. longis, gracillimis, a venis primariis arcuato-adscendentibus et inter venas convergentibus, subtus pallidiores ad venas densissime strigosae, pilis fere 2 mm. longis, et ad paginam molliter pubescentes, pilis erectis 1 mm. longis; venae primariae supra valde impressae laterales 4--7 mm. ultra basin confluentes; rami superiores foliosi 3--10 cm. longi valde divergentes ex axillis omnibus, foliolis valde reductis; cymae axillares et terminales pauciflorae, pedunculis et pedicellis adpresso-setosis; flores 4-meri; hypanthium campanulatum 3.5 mm. longum sparse strigoso-setosum; calycis tubus 0.3 mm. longus, lobi adscendentes 1.3 mm. longi supra basin late triangularem subulati; petala obovata valde inequilatera purpurea superne ciliata, 7 mm. longa; antherae subulatae, 4.3 vel 3.3 mm. longae, connectivis 1.2 vel 0.6 mm. longis, ad faciem anteriorem canaliculatis, basi in lobos 2 rotundatos vix dilatatis; ovarium 4-loculare superne molliter albo-pilosum.

Type, Pennell 13992, collected in rocky forest at Pilla-huata, Cerro de Cusilluyoc, Dept. Cusco, Peru, alt. 2200--2400 m., in the Gray Herbarium. Tibouchina saxosa appears to have no related species in the section Pseudopterolepis

with which it may be compared. Superficially it resembles T. asperifolia Cogn., a Peruvian plant with 5-merous flowers.

TIBOUCHINA BRACHYPHYLLA Gl. sp. nov. § Diotantha: rami juveniles angulati sparse setoso-hispidi, pilis 1-2 mm. longis, demum glabrescentes subteretes; petioli fere glabri in ramis sterilibus 2-4 mm., in ramulis floriferis 1-2 mm. longi; laminae variae, ovato-lanceolatae, ovatae, vel late ovatae, in ramis sterilibus usque ad 25 mm. longae 14 mm. latae, in ramulis floriferis saepissime 8-10 mm. longae 5-6 mm. latae, obtusae vel acutae, 3-(vel interdum in majoribus 5-)nerviae, supra (minores) glabrae, sparse ad apicem setulosae, vel (maiores) in zonis 4 longitudinalibus setosae, subtus glabrae vel ad costas sparsissime setulosae; flores 5-meri, verisimiliter ebracteati, in cymulis 1-5-floris ad ramulos axillaribus et terminalibus, pedicellis 1-3 mm. longis; hypanthium subglobosum 3 mm. longum glabrum vel parcissime strigillosum, pilis 0.1-0.3 mm. longis; calycis tubus membranaceus 0.3 mm. longus in medio sinorum late truncatorum setas 2 conico-subulatas 0.4 mm. longas patulas vel subreflexas gerens; sepala patula anguste triangularia 3 mm. longa ciliata, ad apicem acutam breviter setosa caeterum glabra; petala obovata glabra 9 mm. longa; filamenta glabra 4.6 vel 3.6 mm. longa; antherae subulatae vix arcuatae 4.1 vel 3.2 mm. longae; connectivum in ser. ext. 1 mm. longum leviter curvatum basi in lobos 2 dilatatum, in ser. int. simile sed vix productum 0.5 mm. longum; ovarium 5-loculare setis 10 subulatis 0.4 mm. longis coronatum; stylus 7 mm. longus.

Type, Steinbach 8332, collected in forest at Comarapa, Dept. Santa Cruz, Bolivia, alt. 2500-3000 m., and deposited at the New York Botanical Garden. A sheet of the same number in the Gray Herbarium is identical and also exhibits sterile lower branches with larger leaves, as described above. Tibouchina brachyphylla has much smaller leaves than any other Andean species known to me.

Rhynchanthera paludicola (Donn.Sm.) Gl. comb. nov.
Tibouchina paludicola Donn. Sm., Bot. Gaz. 42: 293. 1906.

Torresia cearensis Allemao. This leguminous tree, originally described in an obscure publication about seventy years ago, is briefly discussed in the supplements to the Natürlichen Pflanzenfamilien. It is stated to have winged pods and seeds, but little information about their structure has been available. Krukoff's 5495, recently collected in the Acre Territory, is certainly of this genus and apparently conspecific. It consists only of opened pods, seeds, and detached leaflets.

Neither pods nor seeds were adequately described in the *Pflanzenfamilien*. In our plant the pods are dark brown, linear-oblong, 4.5--7 cm. long, rounded at both ends, glabrous, and strongly flattened except over the single seed, where they are somewhat swollen. The seed is about 5 mm. shorter than the pod, solitary and basal. It consists of a basal wing, with a linear hilum across the end, and an apical kernel. The kernel is dark gray, 10 mm. long, flattened-ellipsoid, thinly tomentose, and exhales a strong odor of cumarin when opened. The wing conforms to the dimensions of the pod and is generally very thin and almost translucent, but it is slightly thicker and opaque over the vascular supply near one margin. It apparently represents an expansion of the funiculus, comparable to the arilloid structures in many other genera of legumes.

The leaflets of our specimen are linear-oblong, 5--10 cm. long, 1--2 cm. wide, acuminate, rounded at base, glabrous, on petiolules 2 mm. long, and with secondary veins obsolete.

According to Mr. Krukoff, the native name in the Acre Territory is Cumaru de Cheiro, referring to the odor of the wood, that of the true tonka bean being odorless.

ALSEIS LATIFOLIA Gl. sp. nov. Arbor 8 m. alta ramis teretibus novellis ferrugineo-pubescentibus mox glabrescentibus; folia ad apicem ramorum dense conferta internodiis circiter 1 mm. longis; petioli 15--25 mm. longi ferrugineo-pubescentes; laminae firme chartaceae obovatae vel oblanceolatae 8--12 cm. longae 2.5--6 cm. latae acutae vel obtusae nec acuminatae basi subito contractae et secus petiolum breviter decurrentes, supra ad paginam breviter scabro-pubescentes ad costam densius pilosae, subtus dense pubescentes praecipue venas venulasque; spicae complures terminales at ex axillis superioribus paniculam laxam formantes, fructiferae 8--11 cm. longae; capsulae sessiles confertae anguste clavatae 8-9 mm. longae ferrugineo-pubescentes; semina linearia alata.

Type, Krukoff 2043, collected on terra firma near Coroatásinho, State of Maranhão, and deposited at the New York Botanical Garden. While apparently most nearly related to *A. floribunda*, it is amply differentiated from that and other species by the broad leaves with broad bases and distinctly pubescent beneath and by the short and slender hairy capsule.



Gleason, Henry A. 1935. "Botanical miscellany." *Phytologia* 1(3), 133–137.

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