

THREE NEW SPECIES OF SAPINDACEÆ FROM WESTERN MEXICO AND LOWER CALIFORNIA.¹

By L. RADLKOFEK.

Serjania (?) **albida** Radlk. sp. nov.; *Paullinia* (?) sp. Vasey et Rose, Contr. Nat. Herb. i. 82 (1890). Scandens, suffruticosa, parvula; rami (caules) tenues, sexangulares, angulis glabris, faciebus leviter canaliculatis, albide pulverulento-puberulis; corpus lignosum simplex; folia ternata; foliola parva, ovata, obtusa, subtrilobodentata, terminale in petiolulum longum anguste marginatum abrupte contractum, lateralia petiolulis brevioribus insidentia, omnia membranacea, pallide viridia, opaca, glabra, nec nisi glandulis microscopicis adspersa, punctis pellucidis obscurius notata, epidermide mucigera (paginae superioris quoque stomatibus iuncta); petiolus (communis) brevis, nudus; thyrsi solitarii, folia subaequant, rachi per brevi; flores (non nisi insectorum ictu deformati suppetebant) parvi; sepala puberula.

Rami thyrsgeri diametro 1.5-2 mm., internodiis elongatis 5-7 cm., longis. *Folia* 3-5 cm. longa, 2-4 cm. lata; foliola terminalia petiolulo 1.5 cm. longo excluso 1.5-2 cm. longa, 1-1.5 cm. lata, lateralia minora; petiolus 6-15 mm. longus; stipulae minimae, subulatae. *Thyrsi* 3-6 cm. longi.

In California inferiore ad Santa Agueda: Palmer No. 263!

Observ. *Affinis videtur Serjania* (?) *californica* Radlk. (v. Serj. Suppl. 1886. 139; *Cardiospermum*? sp. Gray), sed ut haec quoque quoad genus dubia est. An *Paullinia sonorensis* Wats., an *Cardiospermo spinoso* Radlk. congener?

Serjania **brachylopha** Radlk. sp. nov.; *Serjania* sp.? Watson, Proc. Amer. Acad. xxii. 403 (1887); coll. Palmer No. 381!

Scandens, fruticosa, ramis petiolisque sparsim crispato-pilosis vel subsetulosis, ceterum glabra; rami subtrigoni, 6-sulcati, cortice pallide subfusco; corpus lignosum compositum e centrali majore et periphericis 3 parvis angulos efficientibus; folia biternata; foliola lateralia ovato-oblonga, acuta vel inferiora obtusata, breviter petiolulata, terminalia late rhombea, acuta et mucronulata, in petiolulum contracta, omnia subduplicato-serrata, membranacea, reti venarum tenerrimo instructa, praeter nervos glabra nec nisi glandulis microscopicis adspersa, impunctata, epidermide mucigera; petiolus communis partialesque nudi; thyrsi solitarii, dense cincinniferi; cincinni stipitati, deflorati pedicellorum supra medium articulorum articulis inferioribus stipitem aequantibus sat numerosis scopiformes; flores parvuli; sepala exteriori puberula, interioribus tomentellis fere dimidio breviora; fructus—

Rami thyrsgeri diametro 2.5 mm. *Folia* circ. 11 cm. longa, totidem lata; foliola terminali petiolulo 1-centimetrali excluso 5 cm. longa, 3.5 cm. lata, lateralia super-

¹The three following new species of Prof. Radlkofer were intended to form a part of my next report upon Dr. Palmer's Mexican plants. At Prof. Radlkofer's request, I have published them here so as to enable him to refer to them in his work on the order soon to appear.—J. N. ROSE.

iora 4 cm. longa, 2 cm. lata, inferiora plus dimidio minora; petiolus communis 2-3 cm. longus, partialium intermedius circ. 3 cm. lateralis 1 cm. longi; stipulae parvae ovato-triangulares. *Thyrsi* folia superantes, rhachi quam pedunculus communis longiore; cincinni circ. 8-flori, contracti, stipite 2.5-3 mm. longo suffulti, pedicelli circ. 4 mm. longi, supra medium articulati. *Flores masculi*: *Sepala* exteriora vix 2 mm., interiora 3 mm. longa. *Petala* e late obovato abruptius attenuata, 3 mm. longa, 2 mm. lata, intus glanduligera; squamae superiores crista brevi truncata, crenulata appendiceque deflexa brevi barbata, inferiores crista dentiformi instructae. *Tori* glandulae superiores ovatae glabrae, laterales minores subconformes. *Stamina* glabra, nec nisi breviora extus pilis singulis adpersa. *Germinis* rudimentum apice puberulum.

In Mexico septentrionali: Palmer No. 381! (Jalisco, Tequila, m. Aug. to Sept., 1886, flor.).

Observ. Habita accedit, ut jam Watson l. c. indicavit, ad *S. racemosam* Schum.; vera affinitas autem ei potius est, ut videtur, cum *S. mucronulata* Radlk. in eadem Sectione xi (*Physococcus*).

***Cardiospermum spinosum* Radlk. sp. nov.** Suffruticosa, affinis *Cardiospermo tortuoso* Benth.; insignis cirris binis ad apicem pedunculi communis in spinas conversis, pedunculo inde apice furcillato ex angulo quasi furculae rhachiam brevem cum floribus paucis, si qui sunt, protrudente, vel interdum omnino sterili ipsoque in spinam simplicem converso; rami thyrsigeri geniculato-flexuosi, tenues, e 5-6 angulari subteretes angulis vix prominulis subfuscis glabratis, faciebus pulverulento-canopuberulis; folia e ternato folioli terminalis dissociatione transeuntia in 5-foliolato-pinnata; foliola superiora obovata, inferiora suborbicularia, parvula (vix 1-centimetralia), subsessilia, obtusa, subsinnato-crenata vel lobata nec nisi glandulis microscopicis et in nervis pilis singulis adpersa, crassiuscule membranacea, pellucide lineolata utriculis laticiferis sat crebris et plerumque venis approximatis, epidermide valde mucigera exceptis solummodo cellulis stomata in pagina superiore quoque numerosa (puncta albida efficientia) cingentibus; petiolus nudus; stipulae minutae, subulatae, thyrsi abbreviati, pauciflori; flores pro genere mediocres; sepalala 5 (?).

Rami thyrsigeri diametro 1 mm. vix superantes. *Folia* ramorum thyrsigerorum 2.5 cm. longa, summa minora; foliola 0.5-1 cm. longa. *Thyrsi* vix 1.5 cm. longi. *Flores masculi*: *Sepala* duo exteriora breviora, interiora 4 mm. longa. *Petala* obovata, in unguem latum attenuata, 4 mm. longa, 3 mm. lata, intus (densius quam extus) glanduligera; squamae (cristis exclusis) quam petala dimidio breviores, margine villosulae, superiores crista obcordata appendiceque deflexa mediocri dense barbata, inferiores crista obliqua instructae. *Tori* glandulae superiores ovatae, glabrae, inferiores minores, subannulares. *Stamina* adpresso puberula, apice glabra. *Germinis* rudimentum glabrum.

In California inferiore: Palmer No. 2! (La Paz, m. Jan. to Feb., 1890, flor.).

Observ. Affinis *Cardiospermo tortuoso* Benth., quod sepalis 5 quoque (ut e specimenibus a Brandegee in Magdalena Bay lectis patet) gaudet nec non foliolis eodem modo ac in *C. spinoso*, supra quoque stomatibus numerosis instructis.