acquires a height of 8 or 9 palms and a diameter of 2 inches, the leaves are ovate-lanceolate, abruptly acuminate, broad, and unequally rounded at the base. The bracts are of a deep scarlet colour, the fertile flowers (♀) usually solitary in the axils of the lower bracts, the sterile ones (♂) two together in the axils of the upper bracts, the spadix erect. Of the genus *Heliconia* I have seen two species, one with the spathes but little conspicuous, which occurs sometimes in the woods near this town; the other, whose characters agree well with the *H. latispatha*, Benth. (Walp. Ann. i. 811), differs from the genus in that the fruit is a berry (trigonous, pedicellate, of a blue slightly purplish colour, 1- to 3-seeded), and not a 3-valved capsule. It so far establishes a passage from the genus *Heliconia* to that of *Musa*; and it will be necessary either to make a new genus for it, or to reform the character of *Heliconia* as to the fruits, so as to enable it to comprehend this species. This Musacea is probably already known; for it is very common from the middle to the base of the Cordillera called *Serra de Santos*, and occurs also in the Litoral.

Irideæ, besides the numerous species cultivated for ornament in our gardens, are represented here by very few species.

Of all these plants I shall send you specimens, accompanied by descriptions and drawings, to the best of my ability.

JOAQUIM CORREA DE MELLO.

Campinas, June 3, 1869,

On *Myrocarpus frondosus*, Allem. By J. CORREA DE MELLO, of Campinas, in South Brazil. (Translated from the Portuguese, with a Note, by G. BENTHAM, Esq.)

[Read February 3, 1870.]

MYROCARPUS FRONDOSUS, *Allem. Diss.* 1847 et 1848, cum ic. Calyx tubulosus, obconicus, rectus, breviter 5-dentatus, vix a latere compressus, infra medium (ad disci marginem) leviter constrictus, parte discifera carnosula, supra discum membranaceus, nervis 5 tenuibus in apices dentium terminantibus percursus, extus tenuiter pubescens; dentibus inter se æqualibus, æstivatione varie imbricatis, ad marginem disci haud divisus (sepalis ultra discum coalitis). Discus in fundo calycis, tenuis, viridis. Petala 5, inter se æqualia, obovato-linearia, apice rotundata concavaque, membranacea, medio nervo tenuissimo virescente percursa, ineunte anthesi alba patentiaque, mox leviter flavicantia, ad

marginem disci extra stamina inserta, in alabastro vix imbricata, summo intimo, cæteris varie imbricatis. *Stamina* 10, libera; filamenta (in alabastro laud incurva) subulata, alba, glabra, quorum 5 alterna citius evoluta jam ad corollæ explicationem exserta, dum altera 5 vix ad marginem calycis attingens, hæc tamen sensim accreta demum priora longitudine æquant; antheræ flavæ, staminum primum evolutorum late ovatæ, cæterum late obovatæ; pollinis granulæ oblongæ, utrinque obtusæ, sulco longitudinali notatæ. *Ovarium* in fundo calycis stipitatum.—*Arbor* folia tempore æstatis dimittens, mense Augusto ante foliorum evolutionem florens. *Flores* odore grato, racemosi; pedicelli basi bractea parva late ovate-subtriangulari acuta, primum membranacea mox scariosa fulti; bracteolæ 0. *Racemi* cylindrici, recti, erecti, solitarii v. 2–3-ni (2–5-ni ex Allemão), alterni, pedunculo communi brevi inserti, paniculam parvam formantes, his ad apicem ramulorum v. supra cicatrices foliorum delapsorum sitis, sæpe in ramorum parte superiore numerosis approximatis, paniculam amplam simulantibus. *Florum* evolutio sæpe ab apice basin versus racemi progreditur, sæpeque gemmæ rami ejusdem magni omnes floriferæ sunt nec folium ullum evolvitur.

From incisions made in the trunk of this tree issues a balsam, at first transparent, of a yellow colour, and of an aroma not very sweet and somewhat terebinthine; but by exposure to the air it assumes a red colour and a fragrant aroma, and is indubitably the balsam “Caburé-íca” mentioned by Piso, ‘De Medicina Brasiliensi,’ lib. 4, cap. v. p. 57, and by Martius, ‘Syst. Nat. Med. Veget. Bras.’ 115.

This *Myrocarpus*, in its botanic properties and the odour of all its parts, resembling those of the corresponding parts of *Myroxylon peruiferum*, Linn., has great affinity with the genus *Myroxylon*. Bentham and Hooker (Gen. Pl. i. 559), who could not ascertain the æstivation of the corolla from not having seen it in bud, observe the affinity of *Myrocarpus* on the one hand with *Sweetia*, and on the other with *Sclerolobium*; but, considering that the structure of the calyx is rather that of the *Sophoreæ* than of the *Cæsalpinieæ*, they place the genus in the suborder *Papilionaceæ* and the tribe *Sophoreæ*. But as the upper petal is, as above mentioned, always inside in estivation, it appears beyond doubt that *Myrocarpus* must be removed to the suborder *Cæsalpinieæ* and the tribe *Sclerolobieæ*, which comprises species with imparipinnate leaves like those of *Myrocarpus*. In the tribe it would be placed next to *Pœppigia*, which contains species in which the calyx-lobes are united above the disk.

J. CORREA DE MELLO.

The observations of Sen. Correa de Mello would perhaps have determined the removal of *Myrocarpus* to the Sclerolobiæ, if the æstivation described by him were constant. With the above Notes he remitted several racemes in bud, which have been carefully examined. In them we found the estivation of the petals still more variable than is mentioned by Mello; for the upper, or posterior petal, although occasionally inside, as he describes it, is more frequently partially outside, overlapping one of the lateral petals on one side, and being overlapped by another lateral petal on the other side. In one flower, at least, the upper petal was entirely outside; and in another the estivation was contorted, each petal overlapping an adjoining one on one side, the imbrication in all cases slight, and only observable in the upper portion of the bud. *Myrocarpus*, then, like one species of *Sweetia* where a similar diversity of estivation has been observed, must be regarded as one of the few connecting links between the large suborders Papilionaceæ and Cæsalpinieæ; and as in other respects it is evidently more closely allied to *Myroxyton* than to any Sclerolobiæ, we should prefer leaving it in the place assigned to it in our 'Genera Plantarum,' between *Myroxyton* and *Sweetia*.

The course of expansion of the flowers, from the apex to the base of the raceme, pointed out by Correa de Mello is unusual in Leguminosæ, but not quite exceptional, nor yet does it appear to be of any systematic importance; for it has been observed, for instance, in two or three Australian species of *Crotalaria*, whilst the development is normal in closely allied species.

Since writing the above, I have received M. Baillon's observations on Cæsalpinieæ, in the first vol. of his 'Histoire des Plantes,' from which it appears that he has found in *Cadia*, Forsk., and in *Barklya*, F. Muell., the same variable æstivation as that observed, as above, in *Myrocarpus*. He therefore proposes to remove those two genera to Cæsalpinieæ, although they have both, in a very decided manner, the hooked radicle of Papilionaceæ. It still appears to me, however, a more natural arrangement to maintain the Sophoreæ as limited in our 'Genera Plantarum,' as a somewhat variable group, including a large proportion of very distinct monotypic, or almost monotypic, genera probably of great antiquity and constituting in various ways connecting links between the two great suborders *Papilionaceæ* and *Cæsalpinieæ*, but yet more nearly allied to the former than to the latter.

G. BENTHAM.