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LXI.—A NEW OIL-SEED FROM SOUTH AMERICA.

(*Osteophloeum platyspermum*, Warb.)

ENID M. JESSON.

At the present time, when vegetable fats are so largely in demand, the discovery of a seed yielding over fifty per cent. of fat, is likely to be of considerable commercial importance. The seed in question is that of *Osteophloeum platyspermum*, Warb. (*Myristica platysperma*, Spruce), a shipment of which was recently received at Liverpool; the tree is a native of North-West Brazil, where it was discovered by Spruce in 1852, in the forest near Panuré, on the river Uaupés, a tributary of the river Negro.

Several members of the *Myristicaceae* are already well known as yielding hard, usually yellowish fats, containing a large proportion of the glyceride of myristic acid, and the present representative is no exception to the rule—the fat obtained on extraction with petroleum ether being white and crystalline, and possessing a very slight smell. 55·2 per cent. of fat was obtained from the kernels of this sample, the analytical constants of which are given below:—

Melting point	...	...	...	...	43° C.
Solidifying point	...	...	...	...	39° C.
Saponification value	...	...	...	...	240·2 mmg.
Iodine value (Wijs)	...	...	...	...	6·3 per cent.
Refractive index at 40° C. (Zeiss Butyro-refractometer)	...	...	...	...	36·9

In addition to the above, the oil was found to possess 5·3 per cent. of free fatty acids (calculated as oleic acid).

Fig. 1. Whole fruit showing pericarp. Fig. 2. Seed showing middle layer of testa. Fig. 3. Vertical section of seed, outer layer of testa removed, (A). Middle layer. (B). Inner layer. (C). Endosperm.
All figures $\times 1\frac{1}{2}$.

The fruits are globose or elliptic, about $2\frac{1}{2}$ cm. long and $1\frac{1}{2}$ cm. high, and are either solitary or borne in small clusters on a short pedicel, the dehiscence taking place in the median plane, into

two valves. They consist of a pericarp, which is about 1 mm. thick, and in the dry state dark brown and very much wrinkled (fig. 1). This encloses the seed, the testa of which is made up of three layers, the outer, yellowish and more or less scaly may still be seen on some of the seeds, but in the majority of cases it has disappeared. The second layer is brown like the pericarp, firm and rugose in a somewhat radial manner, as shown in fig. 2; finally there is a thin brown skin (which is often decomposed to a resinous mass) covering the greenish-white endosperm, and in section the characteristic ramifications of this innermost layer of the testa into the endosperm may be seen (fig. 3). It has been stated above that the fat is white, and this may be attributed to the fact that these ingrowths are few in number, and therefore do not discolour the fat brown or black on extraction, as in the case of *Scyphocephalum Ochocoa*, or dark yellow as in several other species of *Myristica*, though in all these cases the endosperm itself is white. The aril, usually present in members of this family, is stated by Warburg to be complete or entire and not lacinate, but as no trace of it can be found in the present seeds, it is probable that it disintegrates early.

The specimens received from Liverpool had already been decorticated, that is the outer shell (pericarp) had been removed, while the remaining inner shell (middle testa) was found to be present in the same proportion as the kernel. In this connection it is important to note that this inner shell, though firm, is brittle, and would present little or no difficulty in crushing and separating.

It is not possible to say at present the quantity in which these seeds may be available for commercial purposes.

LXII.—DIAGNOSES AFRICANAE: LXI.

1521. *Lonchocarpus brachybotrys*, Dunn [Leguminosae-Dalbergieae]; *L. eriocalyci*, Harms, affinis, sed florum paniculis cum foliis fasciculatis et foliolis minoribus distinctus.

Arbor mediocris (5–10 m.), ramis patentibus primo dense velutinis tandem glabris rugosis. *Folia* 3–4-juga, 5–10 cm. longa, petiolo 3–4-plo longiora, rachi breviter velutina; stipulae persistentes, lineares, 3–5 mm. longae, tomentosae; foliola superiora lateraliter oblanceolata, acuta, apiculata, 3–4 cm. longa, subcoriacea, supra tandem glabra, nitentia, subtus tomentosa, venis margini appropinquantibus 6–7-paribus haud prominentibus; petioluli 1–2 mm. longi; stipellae setaceae, 2–3 mm. longae. *Flores* in racemis brevibus vel paniculis pauciramosis cum foliis lateraliter fasciculatis; bractee bracteolaeque lineares, minutae. *Calyx* 5–6 mm. longus, dense breviter lanatus; dentes aequales, triangulares, obtusi, tubo paullo breviores. *Petala* non visa. *Stamina* diadelpa. *Legumen* lineari-oblongum, utrinque rotundatum vel basi cuneatum, ad 7 cm. longum, 2 cm. latum, molliter pubescens; valvae inter semina cohaerentes, papyraceae.

TROPICAL AFRICA. French Congo: Shari basin; Senoussi Country, banks of Boro River, *Chevalier* 7771; 7772.