

the present disposition seems reasonable. Brass's field notes state that collections were made in mossy forest, where common in gullies and on sheltered slopes as an intruder from lower levels.

Specimens examined. NEW GUINEA. WEST IRIAN: 15 km. S. W. of Bernhard Camp, Idenburg River, 1800 m. alt., Jan. 1939, *L. J. Brass 12119* (A); *12139* (A).

Heterospathe glauca (Scheffer) H. E. Moore, *tr. nov.*

Ptychandra glauca Scheffer, Ann. Jard. Bot. Buitenzorg 1:160. 1876

Ptychosperma Musschenbroeckianum Beccari, Malesia 1:53, 100. 1877 ('*Musschenbroeckiana*').

The name *Ptychosperma Musschenbroeckianum* is placed in synonymy here on the authority of Beccari in manuscript edited after his death by Martelli (*Nuovo Giornale Botanico Italiano* ser. 2, 42: 74, 78. 1935). The type of *Heterospathe glauca* is from Batjan Island, that of *P. Musschenbroeckianum* from Ternate, and there are minor differences in the number of stamens and of staminodes noted by Beccari.

Heterospathe lepidota H. E. Moore, *sp. nov.*

Ab *Heterospathe Versteegiana* sepalis floris masculi et feminei castaneo-vel ferrugineo-lepidotis et pinnarum nervis secundariis submarginalibus non brunneo-punctulatis differt.

Solitary, to 5.5 m. high, the stem 4 m. high, 5 cm. in diam. at base, 7.5 cm. in diam. under leaves. Leaves 2.5 m. long, 7.5 dm. broad, with ca. 35 pairs of pinnae; sheath short, ca. 20 cm. long, sparsely dark-brown appressed-lepidote where protected, with fibrous margin produced opposite petiole; petiole ca. 55 cm. long, sparsely to very sparsely brown appressed-lepidote above

and below; rachis similarly lepidote; pinnae slender, not prominently brown-punctulate below, with few large brown scales on midnerve below, the midnerve and submarginal secondary nerves prominent and elevated above, basal pinnae ca. 45 cm. long, 1 cm. wide, middle pinnae ca. 62 cm. long, 2.5 cm. wide, apical pinnae ca. 36 cm. long, 1.5–2.7 cm. wide. Inflorescences interfoliar, to 1 m. long, erect in flower with drooping top, more clearly drooping in fruit; peduncle ca. 85 cm. long, densely brown-punctulate basally to densely ferrugineous-lepidote-tomentose apically; lower bract (not seen) inserted near the base, upper bract inserted ca. 52 cm. above the base, marcescent with tubular base remaining; rachis densely ferrugineous-lepidote-tomentose, with 12–15 branches, the lower and middle branches at least again once-branched into densely ferrugineous-lepidote-tomentose rachillae to 36 cm. long, 2–3 mm. in diam., densely flowered, the triads subtended by a very low bract; bracteoles subtending the pistillate flower low. Staminate flowers yellowish, ca. 3 mm. long; sepals 1.2 mm. high, rounded and ferrugineous-lepidote dorsally; petals glabrous, 2.4–2.8 mm. long; stamens 6; pistillode cylindrical, as long as stamens in bud; pistillate bud with sepals ferrugineous-lepidote dorsally. Fruit red, drying roughened, ellipsoid-ovoid with excentrically apical stigmatic residue, 1.5–1.7 cm. long when dry, 1 cm. in diam.; seed ovoid, light brown, rounded at apex, 9 mm. high, 8 mm. in diam.

Specimen examined. NEW GUINEA. PAPUA: Northern Division; on steep slope of ca. 10 m. deep gully, fairly open to sun, ca. 2 km. N. E. of Sangara homestead (ca. 10 km. W. of Popondetta), alt. 200 m., August 7, 1953. *R. D. Hoogland & J. S. Womersley 3241* (A, type).

Vernacular name: *soriki* (Orokaiva language, *mumuni*).

Heterospathe lepidota, so named because of its lepidote sepals, is similar to *H. Versteegiana* but differs in its vestite sepals and in its pinnae with conspicuously elevated secondary nerves toward the margin of the upper surface and little or no brown punctulation on the lower surface. It clearly belongs with that group of species which Beccari at one time called *Barkerwebbia*, including in addition to the above two, *H. elegans* and *H. humilis*.

Heterospathe Muelleriana (Beccari)

Beccari in Martelli, Nuov. Giorn. Bot. Ital. ser. 2, **42**:50, 74. 1935.

Ptychandra Muelleriana Beccari, Nuov. Giorn. Bot. Ital. **20**:177. 1888.

New collections agree with the type of *Heterospathe Muelleriana* and extend its range substantially. They also permit the addition of information on the staminate flowers which are 7–8 mm. long with (10–) 14–15 stamens and a trifid-conic pistillode shorter than the stamen-filaments.

Specimens examined: NEW GUINEA. PAPUA: Eastern Highlands District; northeast slopes, Mt. Michael, alt. 2000 m., 9 Sept. 1959, *L. J. Brass 31484* (A). Central District; Mt. Obree, a. 1887, *W. A. Sayer s. n.* (FI, type). Milne Bay District; east slopes, Goodenough Island, alt. 1600 m., 20 Oct. 1953, *L. J. Brass 24839* (A).

Heterospathe obriensis (Beccari) H. E. Moore, *tr. nov.*

Ptychandra obriensis Beccari, Nuov. Giorn. Bot. Ital. **20**:178. 1888.

Ptychandra? montana Burret, Notizbl. Bot. Gart. Berlin **12**:324. 1935.

Additional collections suggest that *Heterospathe obriensis* would include *Ptychandra? montana* which Burret compared only with *Ptychandra glabra*

and *P. glauca*. I have examined types of both species and have compared other collections with them. Staminate flowers, not previously described, are 9–11 mm. long with 18–21 stamens and short conic pistillode. Fruit is variable in size, 29–35 mm. high, 22–28 mm. in diameter. The species as I now interpret it is known from the following stations in Papua.

Specimens examined. NEW GUINEA. PAPUA: Central District; Mt. Tafa, May–Sept., 1933, *L. J. Brass 4974* (isotype of *P. montana*, A); Mt. Obree, a. 1887, *W. A. Sayer s. n.* (type of *P. obriensis*, FI). Milne Bay District; mossy forest of riverbanks, gorge of Upper Gwariu River, north slopes of Mt. Dayman, alt. 2030 m., 15 June 1953, *L. J. Brass 22940* (A). District not known; Lala River, alt. ca. 5000 ft., 26 Dec. 1935, *C. E. Carr 14023* (A), 7 Mar. 1936, *C. E. Carr 16004* (BH).

Heterospathe pulchra H. E. Moore, *sp. nov.*

Caulis solitarius ad 10 m. altus; foliorum pinnae utrinque 40–50; inflorescentia infra folia ad 1.24 m. longa ramis in rachillas glabras glaucas 10–11 divis; flos masculus 3–4 mm. altus staminibus 6 pistillodio trifido-conico; fructus ruber globosus 8 mm. in diam.

Stem solitary, 8–10 m. high. Leaves fewer than 10, pale green; petiole and short sheath ca. 1 m. long; sheath alone ca. 35 cm. long with scattered, minute, brown, membranous, fringed scales; petiole ca. 65 cm. long, at first with pale appressed scales (at least above) becoming glabrescent or glabrous; blade ca. 2.5 m. long; rachis glabrous; pinnae probably 40–50 on each side, glabrous except for large, shining, brown, membranous scales on the midnerve below, the lower surface not or scarcely brown-punctulate, midnerve and submarginal nerves prominent above, basal pinnae