

sheath lepidote with small, scattered, light brown, membranous scales, split about halfway to the base opposite the petiole, 10–22 cm. long, the margin fibrous; petiole 29–54 cm. long, rounded and with scattered, minute, pale scales below, convex and essentially glabrous above; rachis 48.5–91 cm. long, lepidote or punctulate above and below; pinnae 18–21 on each side, regularly arranged except the approximate basal pairs, acuminate, the midnerve and 2 secondary nerves near the margins prominent and elevated and membranous-lepidote or merely punctulate above, nerves and surface more or less densely brown-punctulate below and the midnerve with large, brown, membranous, basifixed scales at least in the basal portion, basal pinnae 15–22 cm. long, 0.4–0.7 cm. wide, middle pinnae 20–34 cm. long, 1.5–2.8 cm. wide, apical pinnae 10–16 cm. long, 0.7–1.7 cm. wide. Inflorescences interfoliar, erect, 68–80 cm. high; lower bract 16–19 cm. long, sparsely brown lepidote, upper bract prominently brown lepidote, terminated by a flat rostrum 3–4 cm. long, exceeding the lower by 33–38 cm. and exceeding the peduncle, this densely ferruginous-tomentose-lepidote at least when young; rachis ferruginous- or brown-tomentose-lepidote, 1.5–10 cm. long, with 3–5 rachillae, these 10–20 cm. long, tomentose like the rachis and bearing triads of flowers at intervals of ca. 3 mm.; triads subtended by a prominent acute bract ca. 1 mm. high; bracteoles surrounding the pistillate flowers brown, erect, to ca. 1 mm. high. Staminate flowers purple in bud, 3.5–4 mm. high, acute; sepals ca. 1 mm. long, more or less rounded; petals 3–3.5 mm. high, nerved when dry, asymmetric, angled and more or less acute at the apex; stamens 8–9; pistillode trifid-conic, ca. one-half as long as the stamens; pistillate flowers seen in bud only, the perianth

in fruit of petals 4 mm. long, sepals 2 mm. high; staminodes 3–4. Fruit red at maturity, subglobose, ca. 10 mm. high, 8 mm. in diam. when dry, 10 mm. diam. when fresh, with excentrically subapical stigmatic residue, drying granular; seed brown, 6.5 mm. high, 6 mm. in diam.; endosperm ruminant.

Specimens examined. NEW GUINEA. PAPUA: Milne Bay District; common in oak forest, north slopes of Mt. Dayman, Maneau Range, alt. 1150 m., June 22, 1953. *L. J. Brass 23005* (BH, type; A, isotype).

The epithet is taken from the dwarf habit and small inflorescences which, like those of *H. annectens*, are only once-branched into few rachillae. In this respect, these two species differ from those previously described except *H. humilis*, *H. elegans* and *H. Versteegiana*, all of which have the upper bract inserted well above the middle of the peduncle and staminate flowers with 6 stamens. *Heterospathe delicatula* differs from *H. annectens* in its acaulescent habit, somewhat smaller purple staminate flowers with only 8–9 stamens, in the smaller fruit, and in the much more slender, tomentose rachillae.

Heterospathe glabra (Burret) H. E. Moore, *tr. nov.*

Ptychandra glabra Burret, Notizbl. Bot. Gart. Berlin 11:713. 1933.

The type of this species was collected in flower by E. Mayr (n. 611) in the Cyclops Mountains, West Irian, in 1928. A somewhat more recent collection of fruiting material collected by Brass appears to belong here. The fruits are red, subglobose, 15 mm. high, 13–14 mm. in diam. with excentrically apical stigmatic residue. The Brass specimens cited below differ from the description of the type in that rachillae are sparsely brown-lepidote in flower, but the correspondence is otherwise so good that

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 masculis 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 cylindric, 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*).