

## ***Begonia lazat* (Begoniaceae), a New Culinary Begonia from Borneo**

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### **Abstract**

A striking new large-fruited begonia is described from the floodplain forest in the lower reaches of the Kinabatangan River, Sabah. Although rare, this begonia is known by some older local residents as a culinary delicacy when eaten with prawns and chilli.

### **Introduction**

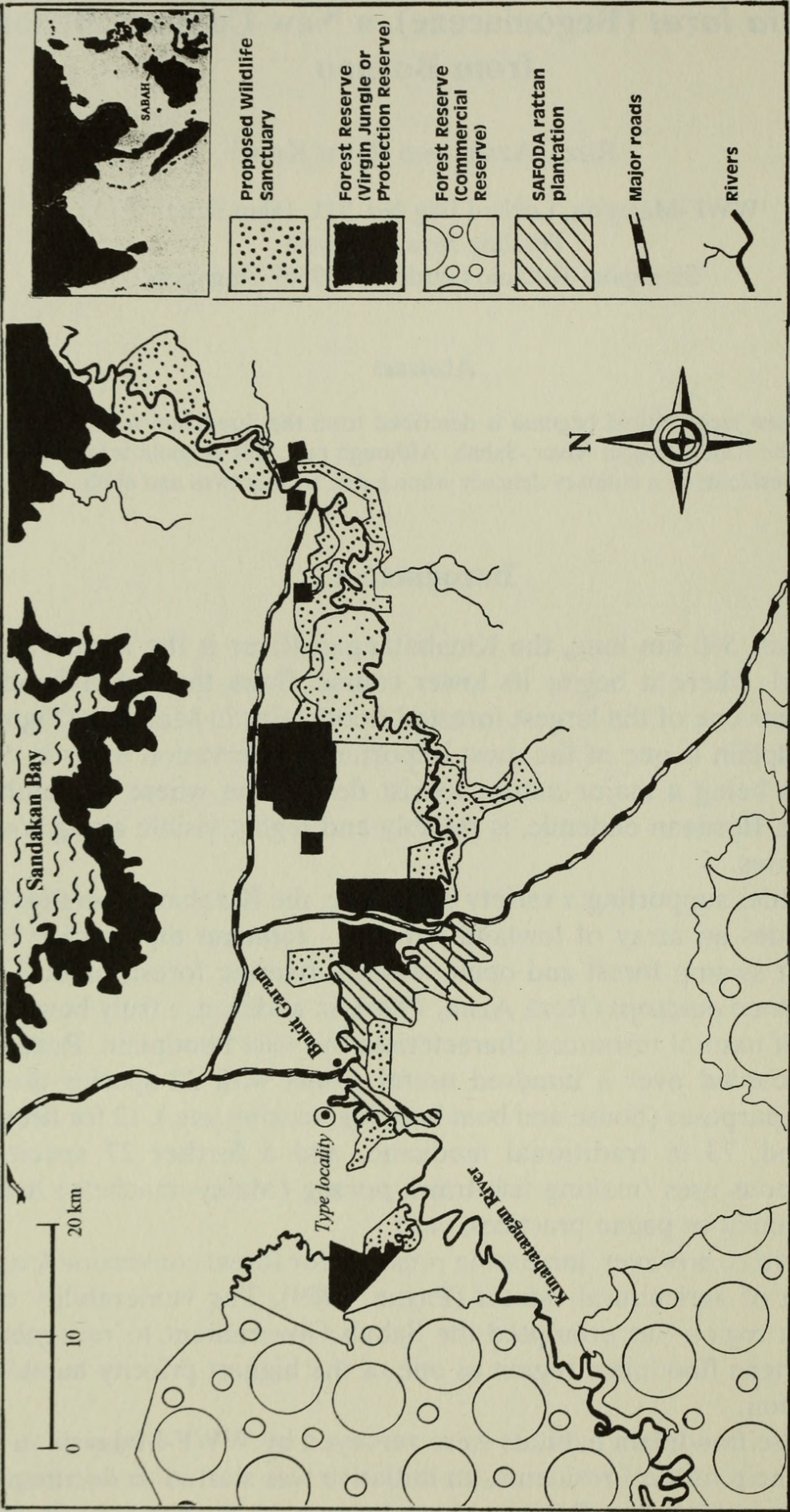
At just over 560 km long, the Kinabatangan River is the largest river in Sabah and, where it begins its lower course, flows through a floodplain that remains one of the largest forested floodplains in Malaysia (Figure 1). This floodplain is one of the most important conservation areas in Sabah as well as being a major nature tourist destination where the proboscis monkey, a Bornean endemic, is reliably and highly visible along some of its tributaries.

Besides supporting a variety of wildlife, the Kinabatangan floodplain also includes an array of lowland habitats - remnant dipterocarp forest, freshwater swamp forest and open swamps, riverine forest, ox-bow lakes and limestone outcrops (Reza Azmi, 1996). In addition, a truly bewildering richness of natural resources characterises this vast floodplain. Reza Azmi (1996) recorded over a hundred useful plants with 22 species used for structural purposes (house and boat building, fencing, etc.), 12 for firewood, 35 as food, 73 in traditional medicine, and a further 27 species for miscellaneous uses (making fish-traps, *parang* (Malay=machete) handles, for ceremonial or pagan practices, etc.).

There is, however, increasing pressure for forest conversion from the expansion of agricultural estates (Payne, 1989). The vulnerability of the floodplain region has prompted the Sabah Government to recognise the Kinabatangan floodplain region as one of the highest priority habitats for conservation.

These floodplain habitats were surveyed by WWF-Malaysia in 1994. With the help of local residents, an initiative was started to document the uses of local plants by village residents living near the remnant floodplain





**Figure 1.** The lower Kinabatangan region showing the location of the type locality and major protected areas.



forests (Reza Azmi, 1996). The new begonia described here was discovered during this study with the help of two knowledgeable elders from Buang Sayang village, which lies near the banks of the lower Kinabatangan River (Figure 1). The wife of one of our local collectors recounted how leaves of this plant are used as a vegetable and that it is delicious when cooked with prawns and chilli.

Despite this begonia being known to the informants, attempts to relocate the plant or other individuals of it a year later proved fruitless and no other specimens have been discovered since the first collection. It is possible that this species may have a narrow habitat preference as it appears to be restricted to early secondary growth of inundated forest, the habitat where it was first discovered.

***Begonia lazat* Kiew & Reza Azmi sp. nov.**

*Holotype:* Reza Azmi RA206 near Kampung Buang Sayang, Kinabatangan District, Sabah, Borneo (SAN, unicate, fruits in spirit).

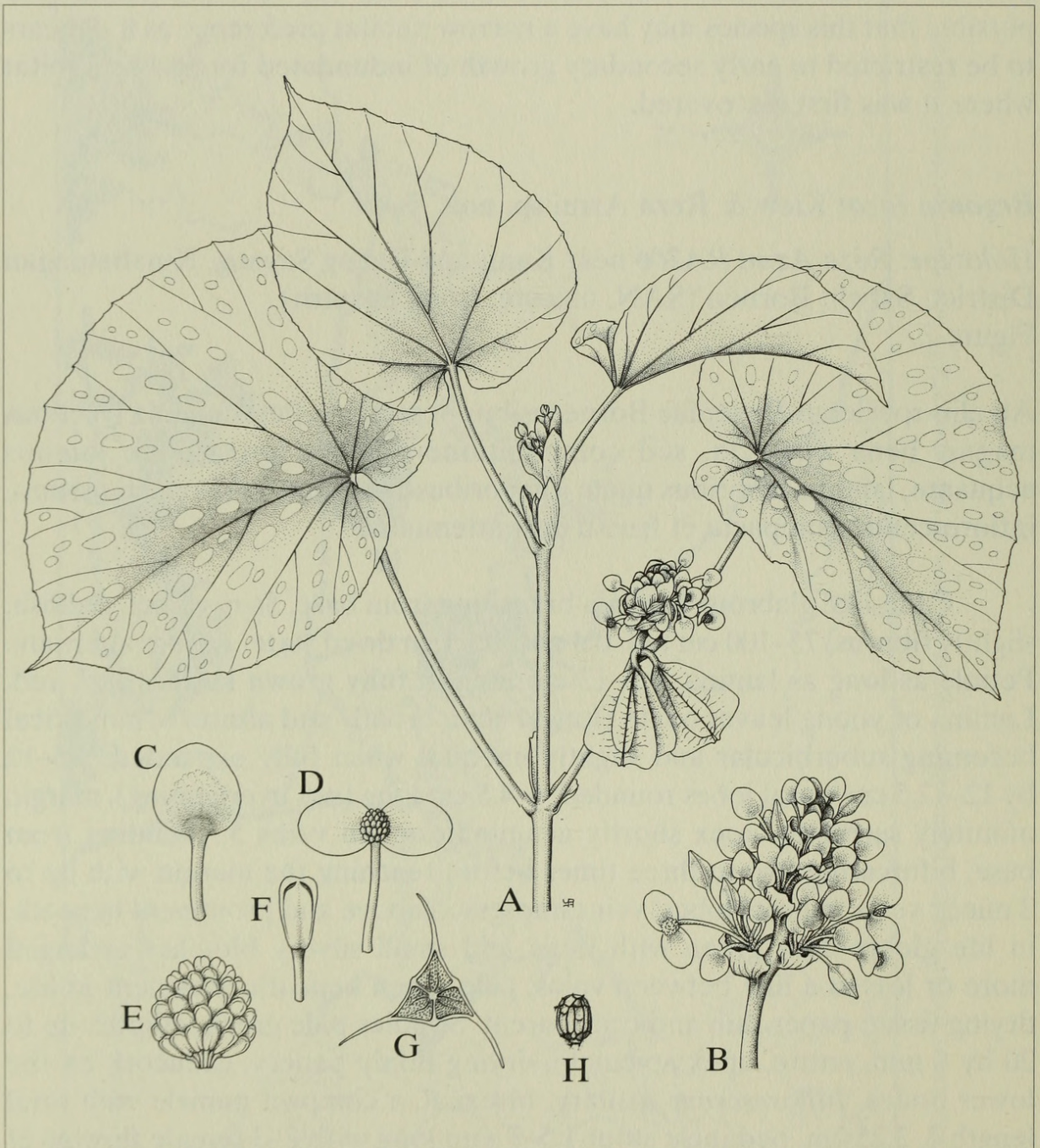
Figure 2.

Ab aliis speciebus Begoniae Borneensibus in sectione Petermannia fructibus magnis bene distincta, sed combinatione petiolis longitudine laminis aequante, laminis latioribus quam longioribus et textura in sicco tenuissimis, inflorescentia compacta et fructu basi attenuatis.

Cane-like glabrous begonia branching from base. *Stems* erect, reddish, slightly fibrous, 75–100 cm tall, 0.4 mm thick in dried state. *Leaves* alternate. Petiole as long as lamina, 9.5–12 cm long in fully grown leaves, dark red. Lamina of young leaves ovate (longer than broad) and almost symmetrical becoming suborbicular and slightly unequal when fully expanded, 9.5–12 by 12–12.5 cm, basal lobes rounded, 4–4.5 cm long (not overlapping), margin minutely serrulate, apex shortly acuminate, main veins 5, radiating from base, bifurcating two to three times before reaching the margin with up to 2 minor veins in basal lobes, veins impressed above and prominent beneath, in life glossy dark green with large and small silvery blotches arranged more or less in a line between veins, pale green beneath, succulent in life, drying tissue-paper thin and transparent. Stipules pale green, elliptic, up to 20 by 8 mm, entire, apex apiculate, drying thinly papery, caducous on the lower nodes. *Inflorescence* axillary, bisexual, a compact panicle with total length c. 2.25 cm, peduncle stout 1.5–7 mm long with 2–3 female flowers at base, male rachis erect c. 12–18 mm long lateral branches up to 3 mm long with dense clusters of male flowers. Bracts pale green, broadly ovate, 14 by 10 mm, partially enclosing the inflorescence, bracteoles similar in shape



and decreasing in size towards apex of inflorescence. *Female flowers*: pedicel in flower 3 mm long, straight with the flower held horizontally, in fruit 5–7 mm becoming thickened and recurved so the fruit is pendant; ovary pale green, cylindric, c. 10 mm long and 5 mm wide, 3-loculate, placentas bilamellate, wings 3 and isomorphic; tepals white, 5, broadly elliptic, the largest 8.5 by 5 mm, apex rounded, entire; styles 3, bifid, falling in fruit. *Male flowers*: numerous, small, pedicels slender up to 11 mm long; tepals 2, glabrous, isomorphic, rosy red outside, broadly oblong, 6.5–8 by 5–5.5 mm,



**Figure 2.** *Begonia lazat*.

A Habit (x 0.3), B Inflorescence with male flowers (x 0.6), C Male bud (x 2), D Open male flower (x 1.3), E Androecium (x 3.3), F Stamen (x 7), G T.S. Ovary (x 0.6), H Seed (x 13).



entire, apex rounded; androecium c. 50 stamens, sub-spherical, staminal column c. 4 mm long, filaments c. 1 mm long, anthers narrowly oblanceolate, 1 by 0.5 mm, apex truncate. *Capsule* pale green ripening brown and papery, obconic, 3.5 cm long and 2.75 cm wide, wings thin c. 9 mm wide, base narrowing into pedicel, apex truncate by the rounded wing angle. *Seeds* broadly oblong, less than twice as long as broad, c. 0.3 mm long.

*Distribution:* Known only from type locality at Kampung Buang Sayang (5°30'N 117° 50'E).

*Habitat:* Growing on a lightly shaded, low earth bank in disturbed seasonally inundated forest close to Kinabatangan River, not common. Apparently intolerant of competition as it is eliminated by subsequent growth of a shrubby layer.

*Notes:* *Begonia lazat* is one of several cane-like *Begonia* species with large fruits 3.5 cm long, such as *B. erythrogyna* Sands and *B. tawaensis* Merr., which belong to section *Petermannia*. Like *B. erythrogyna*, it is atypical of this section in the male flower possessing two instead of four tepals. However, it is unique among Bornean begonias in possessing the following combination of characters: large fruits, which narrow towards the base and have a short stalk; extremely thin glabrous leaves, which are broader than long; petioles as long as the lamina; and inflorescences where the terminal part with small male flowers is extremely short.

'Lazat' (Malay=delicious) indicates the use of its leaves as a sourish vegetable, which together with chilli are cooked with prawns. It is not unique in this respect as several other Malesian begonia species, which have glabrous, tender leaves, are also used, particularly for flavouring fish and prawn dishes.

### Acknowledgements

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