

the blunt conical tip green; testa dark-grey covered with a thin silvery outer skin that breaks up into scales when dry.

MYSORE: Billigirirangan Hills, Western slopes, 3rd mile on Punjur Ghat in stony ground under shade of bamboos, 1260 m., fs. April, *E. Barnes* 2133 (Type in Kew Herb.); 2159 (leaf-blade); June, 2159A (petiole, peduncle and fruiting spadix); June, 2167 (inflorescence in spirits). Notes by Prof. Barnes:

The inflorescence appears before the leaf and the ♀ flowers mature earlier than the ♂ on the same spadix. As leaves of several sizes are found, it appears that a tuber produces a leaf each year for several years before an inflorescence is produced, and thereafter the tuber does not produce a leaf for some time, probably not the same season. Some leaves of immature plants had fewer and broader lobes than is characteristic of the full-sized ones.

LXIX—A NEW SPECIES OF *YOUNGIA* AND ITS BEARING ON THE DISTRIBUTION AND PHYLOGENY OF CERTAIN SPECIES. E. B. BABCOCK (University of California.)

In their monograph on *Youngia*, Babcock and Stebbins (Carnegie Institution of Washington, Publ. No. 484, p. 59) state that the geographic distribution of *Y. cinereipappa*, *Y. gracilis* and *Y. fuscipappa* supports the idea (suggested by differences in size of plant and caudical leaves) that *cinereipappa* is more primitive than the other two species, since its area in southwest China, Indo-China, and Assam is central with reference to the range of the genus, whereas the other two are at the outskirts of the range—*gracilis* in the Sikkim Himalayas and *fuscipappa* in Ceylon. It is also noted (op. cit. 62) that a typical fragment of *cinereipappa* was reported to have been collected in the highlands of Ceylon; also (p. 63) that, if its existence in Ceylon should be verified, this will strengthen the hypothesis that this species is either the ancestor of the other two or represents a common progenital stock. Although no further evidence is at hand concerning the existence of *Y. cinereipappa* in Ceylon, yet some additional evidence, having a bearing on this problem, has been found in the existence of a new Indian species in the Nilgiris area of southern Mysore.

***Youngia nilgiriensis* Babcock, sp. nov.**; affinis *Y. gracili* Hook. f., a qua caudicis foliis majoribus et lyratis, involucri bracteis exterioribus longioribus, corolla longiore, ligularum dentibus longioribus, antherarum tubo appendicibusque brevioribus et praesertim achaeniis longioribus brunneis basin versus haud attenuatis, pappo copiosiore differt.

Herba perennis, 3–4.7 dm. alta. *Caudex* brevis, ligneus. *Folia caudicalia* 10–16 cm. longa, 1.5–3 cm. lata, oblanceolata, acuta, lyrata, pinnatifida, in petiolum longum sensim angustata, supra puberula, infra glabra, segmento terminali triangulato truncato sinuato, segmentis lateralibus rotundis vel triangularibus. *Folia*

caulina inferiora similia vel acuminata, superiora sessilia, lanceolata, acuminato-caudata. *Caulis* tenuis, sinuatus, teres, glaber vel nodis tomentulosus, ramis brevibus vel longis capitula 2-4 gerentibus. *Pedunculi* 1-5 cm. longi, glabri. *Capitula* parvula, circiter 13-flora. *Involucra* 8-9 mm. longa, nigro-viridia, glabra, squamis exterioribus 5-7 inaequalibus 2-3.5 mm. longis, squamis interioribus 8 per vices apice tuberculatis maturitate basi carinatis et spongioso-incrassatis. *Receptaculum* areolatum, nudum. *Flosculi* flavi. *Corolla* 9-10 mm. longa, ligula 2 mm. lata, dentibus 1-1.5 mm. longis, tubo 2 mm. longo breviter pubescente. *Antherae* 2 mm. longae, appendiculis 0.25 mm. longis acuminatis, filamentis 1 mm. longioribus. *Styli rami* virides, 1 mm. longi. *Achaenia* fusca, 5 mm. longa, subcompressa, apice pallida et valde attenuata, basi vix attenuata, costis 12-14 inaequalibus spiculatis. *Pappus* cyaneo-griseus, 5 mm. longus, 2-3-seriatus, subcrassus, persistens.

INDIA : Madras, southern Mysore, Nilgiris area, Sispara, 2060 m., fl. Nov., J. S. Gamble 13341 (typus in Herb. Kew.).

Although this plant exhibits much general resemblance to *Y. gracilis* Hook. f., yet it differs in many details, most notably in the larger, lyrate, caudal leaves, the longer outer involucral bracts, the longer corolla and ligule-teeth, the shorter anther-tube and appendages, and especially in the longer, brown achenes which are not attenuate to the base, and in the more copious pappus.

Y. nilgiriensis is intermediate between *Y. gracilis* and *Y. cinereipappa* in size of plant and leaves ; but it is distinct from both these species, as well as from *Y. fuscipappa*, in the character of leaf dissection and especially in the larger corollas and achenes, as well as the 2-3-seriate pappus. These features of the flowers and fruits, together with the lyrate caudal leaves, characterize *Y. nilgiriensis* as somewhat more primitive than the other three species in this subsection of the genus. Its occurrence in an isolated highland suggests that it may be an endemic relict ; and, in view of its diagnostic characters, that it, rather than *cinereipappa*, may more nearly represent the ancestral type from which this group arose. Further collections in the Nilgiri highlands would be of interest. It is also very desirable that the Cardamom-Palni Hills region, which is farther south and reaches a still higher elevation, should be explored for *Youngia*. In fact this is the only other highland of comparable elevation south of the Himalayas. The attention of Indian botanists to this interesting group of species is invited.

LXX—NEW PLANTS FROM BHUTAN AND TIBET. C. E. C. FISCHER.

Mr. B. J. Gould, I.C.S., Government Agent in Sikkim, took the opportunity afforded by his official tours in Sikkim, Bhutan and Tibet to make collections of plants, totalling up to date about