BLUMEA 27 (1981) 213–216

TWO NEW ORCHIDS FROM ORISSA

SARAT MISRA*

Haines (1924), Fischer (1928), Mooney (1950), Panigrahi *et al* (1964), and other workers' from their studies on the vegetation and flora of Orissa recorded 25 genera and 54 species belonging to the family *Orchidaceae*. Exhaustive collections made by me since 1968 have yielded a wealth of varieties of forms of orchids, which I have identified with 100 taxa (excluding certain novelties) belonging to 31 genera. I describe here one new species and a variety of the genus *Habenaria* Willd. Both the taxa resemble in general *Habenaria foliosa* A. Rich., but differ from it by a number of diagnostic characters.

Habenaria panigrahiana S. Misra, *spec. nov.* — **Fig. 1 A—K.**

Habenaria foliosa A. Rich. maxime similis sed differt tubere radicali perfecte globoso, venis venulisque conspicuis, folii base angustatis, floribus majoribus, usque ad 35 mm diametro, petalorum segmento inferiore quam segmento superiore sesquilongiore, filiformi, reflexo, recto, sed tertio apicali curvato. Labii segmentorum lateralium dimidio basali recto, dimidio apicali sursum introrsum curvato, calcari non manifeste fusiformi nec apice clavato, processibus stigmaticis ligulatis, oblique oblongis lateraliter et deorsum-extenso in quoque latere labii basis.

T y p u s: India, Orissa State, Ganjam District: Mohana, 19°26′ N., 84°17′ E., 500 m, on foot hills under light cover in rockey-loamy soil, occasional, 3 Oct. 1975, *Sarat Misra 122* (holotypus – CAL), 122A – E (isotypi – K, BM). Kainpur 18°55′ N., 84°26′ E., 400 m, on foot hills under moderately thick cover in humus-loamy soil, abundant, 4 Oct. 1976, *Sarat Misra 176* (CAL), *176 A – D* (paratypi – K, BM, L.).

Terrestrial herbs, 22 – 35 cm. high, stem cylindric, leafy from base upwards mainly on the upper two thirds, lower third with close fitting sheath. *Tuber* one, perfectly globose, 15 mm. diameter and vertically below the stem. *Leaves* 7 – 9, spreading, alternate, elliptic-lanceolate, 8 – 11 × 3 – 4 cm., acute; base narrowed petiole-like; leaf margin sometimes undulate; veins and veinlets conspicuous; the lamina and scape covered with a greyish coating when fresh. *Inflorescence* erect, 13 – 18 cm.; peduncle terete, 6 – 8 cm., with 2 – 3 sheathing, lanceolate, acuminate bracts which are 28 × 10 mm, 3 nerved; raceme 6 – 9 cm. long, laxly 8 – 11-flowered. *Bracts* foliaceous, rolled over the ovary half its length, then twisted and remaining free, as long as or shorter than the ovary, lanceolate, to 18 × 6 mm, acuminate with 3 brownish nerves, central nerve strong and continuing to apex, the lateral subterminating and covering the central and with a fainter branch shortly above the base extending half the length. *Flowers* 30 – 35 mm., shortly pedicellate, green, inodourus. *Sepals* unequal, 3-nerved, nerves brownish, continuing to the apex, the central one strong; dorsal sepal hooded over the column, concave, lanceolate, acute, 7 – 8 × 4 mm.; lateral sepals reflexed, keeled, their apices inflexed, sometimes

* Assistant Engineer, (R & B), University Subdivision BURLA, Orissa 768 017, INDIA.

touching each other, obliquely ovate-lanceolate, subfalcate, 8–9 × 4 mm. *Petals* bipartite to the base, fleshy; upper segment erect, sickle-shaped, close to the margin of the dorsal sepal, base about 2 mm wide and then abruptly narrowly linear, 10–12 mm, 2-veined; the outer one shorter and forking into the lower segment which is inclined about 15° above or sometimes almost horizontal, reflexed, 17 × 0.6 mm., the basal two-third filiform, straight, the apical third more filiform, upcurved. *Lip* tripartite to the base with narrowly linear-filiform, subequal and wide-spreading segments; lateral segments together forming an angle of about 150°, ± resembling the lower segment of the petal, 19 × 0.75 mm., the basal half straight, nearly 1 mm. wide, the apical half more filiform, curved upwards and inwards, vein solitary while taking off from edge of the lip base, branching twice on the inner side making 3 parallel veins; mid-segment straight or slightly bent at the obtuse apex, narrowly linear, 12–16 × 1 mm., 3-veined. *Spur* in contact with the ovary or the upper half somewhat bent laterally and backwards, 18 × 1.2 mm., narrowed at the base, mouth narrowly infundibuliform, apex obtuse. *Column* 4 × 2 mm., notched at apex with erect, parallel, clavate anther cells, the tubes bent upwards and inwards about 1 mm long; *pollinia* yellow, obliquely obovate, about 1.5 × 1 mm.; pollen narrowly trapezoid; caudicle transparent, filiform, 3 mm. long with a dilated apex and a brown reniform gland at the base. *Staminodes* 2, extending from the column laterally and downwardly, short, sub-orbicular, surface papillose. *Stigmatic processes* rounded, oblong, ligulate, about 2 × 1 mm., bases oblique, close to and around the entrance to the spur. Mid-lobe of *rostellum* broad, low, rounded; lateral lobes abruptly narrowed, filiform, bent upwards, lying immediately below the anther tubes. *Ovary* green, 20 × 2 mm., slightly fusiform and curved at apex, strongly ribbed.

Flowering: October.

Note: *Habenaria panigrahiana* resembles best *Habenaria foliosa* A. Rich. but differs from it in having its root tuber perfectly globose, veins and veinlets conspicuous, leaf base narrowed, flowers larger, to 30–35 mm. in diameter, lower segment of petals one-and-a-half times as long as the upper one, filiform, reflexed, straight but the apical third curved, lateral segments of the lip typically moustach-like, basal half straight, apical half curved upwards and inwards, spur not prominently fusiform nor clavate at its apex, stigmatic processes ligulate, obliquely-oblong extending laterally and downwardly on either side of the base of the lip.

This species is named in honour of Dr. G. Panigrahi, one of India's distinguished systematic botanists.

Habenaria panigrahiana var. **parviloba** S. Misra, *var. nov.* — **Fig. 1 L—U.**

A varietate typica differt floribus parvioribus, usque ad 23 mm., sepalis apicibus obtusis rotundatisve, petalorum segmento superiore plusminusve recto, segmento inferiore cum segmento superiore angustiorem angulum formanti, aristato. Labii segmentorum lateralium dimidio basali horizontali, dimidio apicali curvato, petalorum segmentis, labiisque glandipunctatis longitudine dimidio, columna apice duplo incisuratis, antherae cellulis non manifeste clavatis, thecis parallelibus non incurvis, rostello prominenti lobis lateralibus, apicibus processuum stigmaticorum erosis.

Typus: India, Orissa state, Ganjam District: Bhanjanagar, 19°57 N., 84°35' E., 200 m., on edge of reservoir under scrubs, in *sal* forest, in loamy soil, fairly abundant, 25 Jan. 1976, *Sarat Misra 140* (holotypus-CAL), *ibid. 140 A–C* (isotypi-K, BM, L).

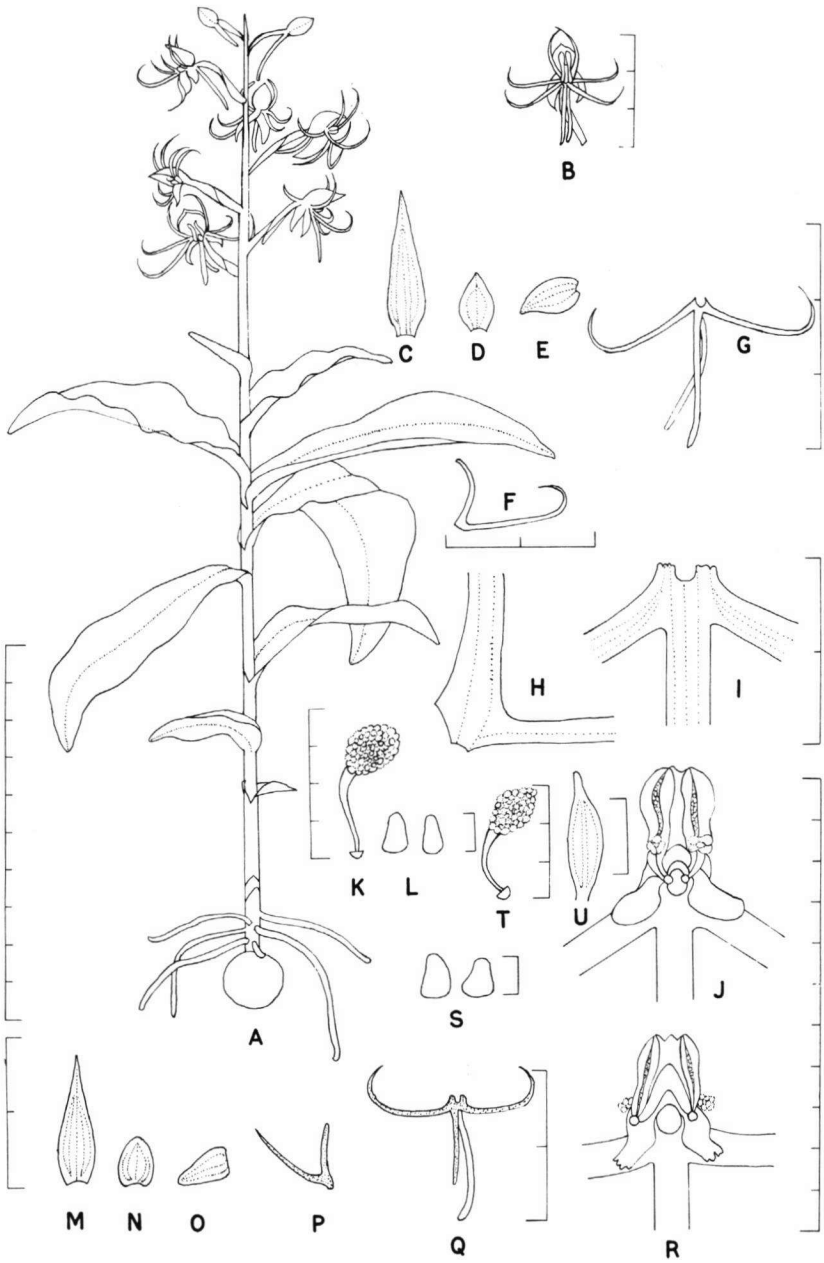

Fig. 1. *Habenaria panigrahiana.* — A. habit; B. flower; C. bract; D. dorsal sepal; E. lateral sepal; F. petal; G. lip; H. base of petal; I. base of lip; J. front view of column; K. pollinium; L. pollen. *Habenaria panigrahiana* var. *parviloba.* — M. bract; N. dorsal sepal; O. lateral sepal; P. petal; Q. lip; R. column; S. pollinium; T. pollen U. fruit. — A – G, M – Q, each division represents one cm; H – K, R, S, U, each division represents one mm; L, T, each division represents one/tenth mm.

Habenaria panigrahiana var. *parviloba* differs from the type variety in having flowers smaller, up to 23 mm; apices of sepals bluntly obtuse or rounded; the upper segment of petal ± straight, the lower segment forming a narrower angle with the upper segment and aristate; the lateral segments of the lip horizontal at the basal half, the apical half curved up, not resembling the lower segment of the petal; the segments of the petal and the lip gland-dotted for a little more than half the length from the base; column doubly-notched at the apex; anther cells not prominently clavate, thecae parallel, not incurved, rostellum pronounced with longer lateral lobes, apex of stigmatic processes erose.

N o t e: At the time of collection from the field, the flowers had wilted and had started fruiting; some live plants collected and planted in the garden at Berhampur, flowered in December, 1976.

ACKNOWLEDGEMENTS

I am thankful to the Director, Botanical Survey of India for very kindly allowing me to consult the herbarium materials at CAL, as well as the library of the BSI, Howrah, India. Thanks are also due to Dr. N. C. Majumdar, Syst. Botanist, Central National Herbarium (CAL) for providing the latin diagnosis.

REFERENCES

FISCHER, C. E. C. 1928. In Gamble, J. Flora of the Presidency of Madras, 1399–1478. London.
HAINES, H. H. 1924. The Botany of Bihar & Orissa, 1150–1182. London.
MOONEY, H. 1950. Supplement to the Botany of Bihar and Orissa, 206–215. Ranchi.
PANIGRAHI et al. 1964. Contributions to Botany of Orissa. Bull. bot. surv. Ind. 6: 237–266.