THE

FLORA OF BRITISH INDIA.

BY

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ASSISTED BY VARIOUS BOTANISTS.

VOL. V.

CHENOPODIACEE. TO ORCHIDACEE.

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L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1890.
Whole plant 3-4 in. high, very closely allied to _T. Brunoniana_, but differing in the solitary flower and orbicular perianth-lobes.

**Order CXLVIII. Orchideæ.**

Herbs of various habit, rarely shrubby, of two principal forms: 1, terrestrial, tuberous-rooted herbs, with annual herbaceous simple stems and solitary or spicate or racemose flowers: 2, epiphytes with perennial stems or branches, variously thickened and forming a pseudobulb, flowering from the top sides of the pseudobulb. Perianth superior, irregular, of 6 free or variously combined pieces; 3 outer (sepals) more or less alike, the 2 lateral sometimes united into a short or long sac or spur-like base (mentum); 3 inner (petals) dissimilar, the 2 lateral alike, the other (lip) usually very differently shaped. Stamens and style united in a column opposite the lip, anther (except in _Cypripedium_ and _Cypripedium_ species) solitary on the front or top or back of the column and free or adnate to it, 2-celled or by subdivisions 4-celled; top of the column sometimes produced in front (towards the lip) into a beak (rostellum); pollen grains usually cohering in each cell into 1, 2, or 4 pairs of oblong globose or pyriform waxy or powdery masses (pollinia) which are free or attached by pairs or fours to a viscus or gland, or a stalk (caulicle) that terminates in a gland and by which the pollen mass or masses may be removed entire. Orary inferior, 1-celled (3-celled in _Apostasia_), usually linear and twisted; stigma a viscid surface on the top or concave face of the column, opposite the lip and below the anther (in _Cypripedium_ the anthers are 2, one on each side of the base of a short style with a discoid stigma). Seeds minute, testa lax enclosing a homogeneous nucleus. — Genera about 310, species about 5000, temperate and tropical, rarely arctic.

**Key to the Tribes and Subtribes.**

**Tribe I. Epidendreae.** Anther 1, opercular, usually deciduous, cells parallel, distinct. Pollinia waxy, 1-4 in each cell, free, or those of each cell held together at the base by a viscid appendage, not attached by their bases or by a caulicle to the rostellum. (5 _Tiplania_ has caudicled pollinia, and in _Calanthe_ and other _Calanthe_ species the long bases of the pollinia resemble caulicles.)

1. Subtribe 1. Malaxæ. Stems simple, leafy, rarely leafless, with often a pseudobulbous base. Inflorescence terminal. Flowers small or minute. Anther erect or inclined, usually persistent, not incumbered. Pollinia 4 (or 8), subequal, close together, usually free (without a viscid appendage).


5. Subtribe 5. Calantheæ. Inflorescence terminal. Pollinia 8 or 4, subequal, connected by viscus or an appendage (in _Calanthe_ and others, the pollinia are appendaged, but the appendage is an undeveloped portion of the pollen itself, and is not derived from the rostellum).
TRIBE II. Vandææ. Anther 1, posticus, opercular, resting on the rostellum, cells usually confluent. Pollinia waxy, usually 2 or 4 in superposed pairs, attached singly or in pairs to a gland or process of the rostellum which is carried away with them when they are removed.


Subtribe 2. Cymbidieæ. Leaves on pseudobulbs, plaited and nerved. Scape leafy or leafless. Lip not spurred. Column not produced into a foot.


Subtribe 4. Notylieæ. Stem with a 1-leaved pseudobulb, or slender. Leaves small, distichous. Anther below and parallel to the terminal erect or inclined rarely horizontal rostellum. Pollinia with a simple or double stipes, pendulous from the tip of the rostellum.

TRIBE III. Neottieæ. Stem not bulbous (roots often bulbous). Anther 1, posticus, opercular, or erect and persistent; cells distinct, parallel. Pollen granular, powdery or in small masses.

Subtribe 1. Vanilleæ. Stem tall, erect or climbing, often branched. Racemes or panicles terminal or terminal and axillary. Anther subopercular, incumbent on a short rostellum.


Subtribe 3. Spirantheæ. Stem simple erect; root not tuberous. Leaves membranous or 0. Anther erect or inclined forward, parallel to the elongate rostellum.

Subtribe 4. Diurideæ. Stem simple; erect from an underground tuber. Anther erect or inclined forward; rostellum usually short.

Subtribe 5. Arethuseæ. Stem simple, erect from an underground tuber. Anther opercular, incumbent or suberect.


TRIBE IV. Ophrydeæ. Anther 1, posticus, erect, inclined or reflexed. Cells parallel or diverging, adnate to the column and often continuous with the rostellum. Pollinia 1, rarely 2 in each cell, granular, produced into short caudicles attached to a gland or to the rostellum.—Terrestrial herbs.


Subtribe 2. Habenarieæ. Anther erect. Pollinia with their glands naked or partially included in a groove or fold of the rostellum.

Subtribe 3. Disèæ. Anther reclinate or reflexed on the back of the column, rarely suberect. Stigma broad, subterminal or subadnate to the lip.

TRIBE V. Cypripediææ. Anthers 2, one on each side of the rosl-
Epidendreae] CXLVIII. ORCHIDEÆ. (J. D. Hooker.)
tellum, sessile or stipitate. Anther posticus. Pollinia granular.—
Terrestrial herbs.

KEY TO THE GENERA.

TRIBE I. Epidendreae.

Subtribe 1. Malaxææ (and Liparideæ, Gen. Pl.).

1. Oberonia. Epiphytic. Leaves distichous, fleshy, laterally compressed, 
nerveless. Flowers very minute, in cylindric spikes or racemes; column very 
short.

small. Column very short.

3. Liparis. Terrestrial or epiphytic. Leaves membranous or coriaceous, base 
sheathing. Flowers small or medium-sized. Column long.

4. Platyclinææ. Epiphytic; pseudobulb 1-leaved. Flowers small; bracts 
rigid, glumaceous, ribbed, margins connate. Column long or short with long or 
short membranous side arms.

5. Tipularia. Terrestrial; pseudobulb 1-leaved. Lip with a long spur.

long.

long.

Subtribe 2. Dendrobeææ.

* Inflorescence lateral on a leafy or leafless stem, or terminal, or from 
the top of a 1–2-leaved pseudobulb.

8. Dendrobium. Lip adnate to the produced foot of the column, contracted at 
the base or clawed, base erect and incumbent on the column, not mobile.

** Inflorescence distinct from the pseudobulb.

9. Bulbophyllum. Racemes or spikes elongate, rarely 1-fld. or umbelliform. 
Sepals usually subequal, free. Lip jointed on the foot of the column and mobile.

10. Ssunia. Characters of Bulbophyllum, but anther turned away from the 
rostellum and dehiscing upwards. Flower spicate, coriaceous, concealed by the 
concaque bracts.

11. Cirrhopedalææ. Flowers umbellate. Lateral sepals longer than the dorsal, 
placed under the mobile lip or connate.

12. Trias. Spike 1-fld. Sepals spreading equally. Anther produced into a 
long appendage. Very small herbs, pseudobulbs 1-leaved.

Pollinia connate in pairs. Pseudobulb small, 1-leaved; leaf caducous.

14. Monomeria. Raceme long, lax-fld.; flowers large. Lateral sepals broad, 
far removed from the dorsal. Pseudobulb 1-leaved; leaf narrow, petioled, 
coriaceous.

Pseudobulb 0, or on a rigid creeping stem; leaf narrow.

16. Pansera. Spike slender, few-fld. Sepals subequal. Lip very narrow, 
with a long sigmoid claw. Pollinia 4, distinct. Pseudobulb narrow, crowded, 
1-leaved.

Lip jointed on the base of the column. Pollinia 2, globose, connected by a granular 
appendage.
Subtribe 2. Habenariae.

106. Habenaria. Lip spurred. Sepals equaling or exceeding the petals. Flowers spicate or racemose. Rostellum not elongate.
108. Hemipilia. Lip spurred. Sepals larger than the petals. Leaf radical, solitary; raceme few-flowered; Rostellum very prominent.

Subtribe 3. Diseae.


110. Dispersis. Lateral sepals spurred or saccate. Lip not spurred, tip 2-lipped or variously dilated.

Tribe V. Cypripedieae.


Tribe I. Epidendreeae (see p. 667).

1. Oberonia, Lindl.

Tufted epiphyte. Leaves distichous, equitant, ensiform (very rarely terete). Flowers very minute in dense subcylindrical spikes or racemes. Sepals broadly ovate or oblong, subequal. Petals smaller. Lip sessile, concave, entire or 2-4-lobed. Column very short; anther terminal, incumbent; pollinia 4, waxy, cohering by a viscus.—Species about 60, Tropical Asiatic, Australian and Pacific.

The flowers are generally 2 to each bract, which is lanceolate and free or broader and more or less convolute, sometimes very broad and forming a tube round both flowers; the upper flower has often a sheathing obtuse bracteole.—The genus wants a careful study of living specimens. I am far from satisfied with the following delimitation of species, the specimens being in some cases quite insufficient for a sure diagnosis.

Sect. I. Oberonia proper. Stem very short, rarely 2-4 in. Leaves ensiform, chiefly radical or subradical. Sepals subequal.

* Side lobes or all the lobes of lip deeply toothed or laciniate.