

CONTRIBUTIONS TO THE ORCHIDACEOUS FLORA
OF QUEENSLAND.

No. 1.*

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Acianthus amplexicaulis (Bail.), *Rogers and White*,
n. comb.

(Text-fig. 1.)

Microstylis amplexicaulis, Bail., Bull. No. 9, Dept. Agric.,
Brisbane (1891), p. 18.

Listera amplexicaulis Bail., Queensl. Flora. V. 156
(1902).

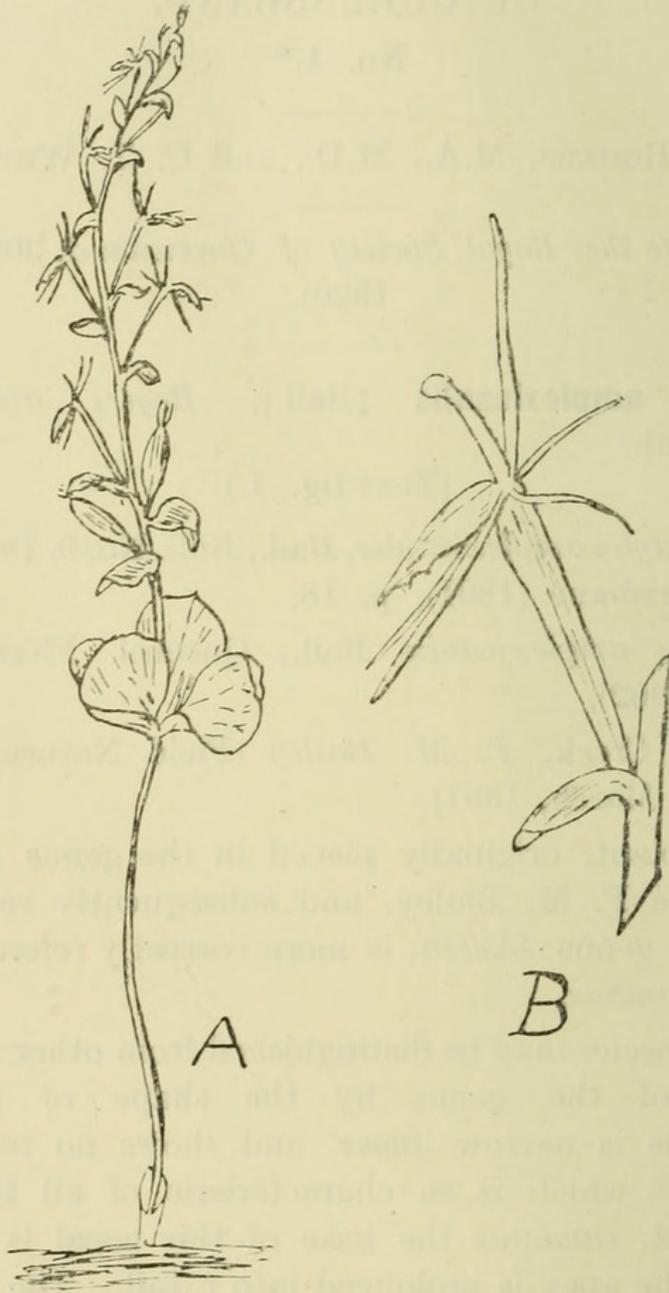
Eudlo Creek, *F. M. Bailey* (Field Naturalists' Club
Excursion, March, 1891).

This plant, originally placed in the genus *Microstylis* by the late *F. M. Bailey*, and subsequently removed by him to the genus *Listera*, is more correctly referable to the genus *Acianthus*.

This species may be distinguished from other Australian members of the genus by the shape of its dorsal sepal; this is narrow linear, and shows no tendency to "hooding," which is so characteristic of all the others. Even in *A. caudatus* the base of this sepal is cucullate, although the apex is prolonged into a tail. The lobulation of the leaf is interesting, because this condition in lesser degree is not unfrequently met with in *Acianthus*. In *A. caudatus*, one of us (R.S.R.) has seen a specimen in which there are no fewer than five well-defined lobules.

*The present paper is the first of a series of contributions to our knowledge of Queensland orchids, and is the result of a critical examination of material in the Queensland State Herbarium. In addition to descriptions of new species and critical notes, the opportunity is taken of recording any locality records that add to our knowledge of the distribution of any particular species.

The deeply-dissected leaf-margins in *A. amplexicaulis* may therefore be regarded merely as an extreme form of a physical feature not uncommon elsewhere in this genus.



Text-fig. 1.—*Acianthus amplexicaulis* (*Bail.*), Rogers and White n. comb.

A. Plant, nat. size. B. Single flower, enlarged.

It seems strange that this little orchid growing within sixty miles of Brisbane has not been gathered again since the original specimens were collected nearly thirty years ago.

Dipodium ensifolium *F. v. M.*

Dunk Island, *E. J. Banfield*; Johnstone River, *W. R. Kefford*; Walsh River, *T. Barclay Miller*.

Eulophia venosa, *Reichb.f.*

Yarrabah, nr. Cairns, *Rev. N. Michael*.

Geodorum pictum *Lindl.*

Johnstone River, *H. G. Ladbroke*; Barron River, *F. M. Bailey*, *E. Cowley*.

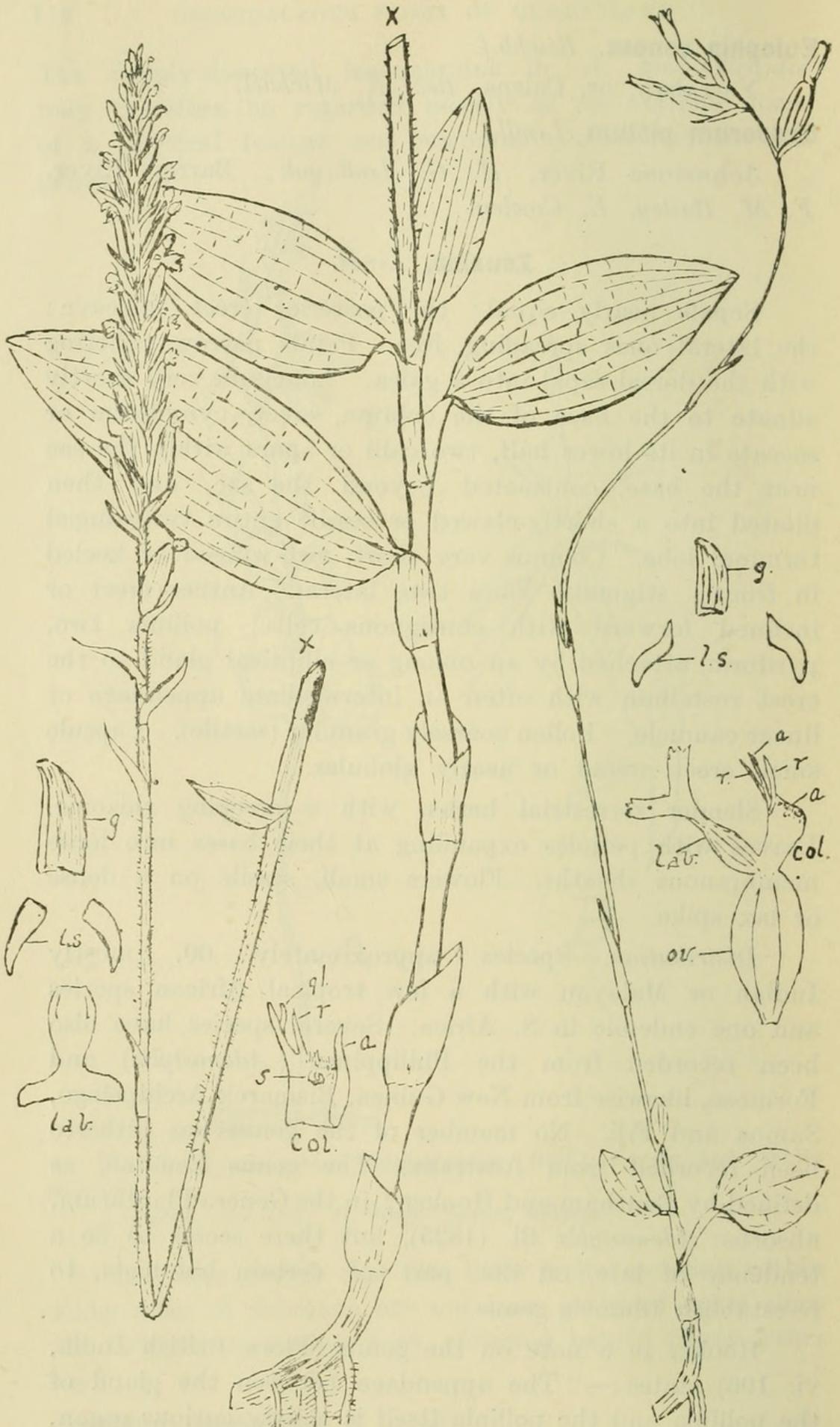
Zeuxine, *Lindl.*

Sepals nearly equal; the posterior erect, concave; the lateral ones spreading, free. Petals narrow, cohering with the dorsal sepal into a galea. Labellum very shortly adnate to the base of the column, erect, cymbiform or saccate in its lower half, two calli or spurs within the sac near the base, contracted beyond the sac, and then dilated into a shortly-clawed or sessile entire two-winged terminal lobe. Column very short, two-winged or keeled in front; stigmatic lobes two, lateral. Anther erect or inclined forward with contiguous cells; pollinia two, pyriform, attached by an oblong or elliptical gland to the erect rostellum with often an intermediate appendage or linear caudicle. Pollen coarsely granular (sectile). Capsule small erect, ovoid or nearly globular.

Slender terrestrial herbs, with a creeping rhizome. Leaves with petioles expanding at their bases into loose membranous sheaths. Flowers small, sessile on a dense or lax spike.

Distribution.—Species approximately 60, mostly Indian or Malayan with a few tropical African species and one endemic in S. Africa. Several species have also been recorded from the Philippines (*Adenostylis*) and Formosa, likewise from New Guinea, Bismarck Archipelago, Samoa and Fiji. No member of the genus has hitherto been recorded from Australia. The genus *Zeuxine*, as defined by Bentham and Hooker f. in the *Genera Plantarum*, absorbs *Adenostylis* Bl. (1825), but there seems to be a tendency of late, on the part of certain botanists, to re-establish Blume's genus.

Hooker in a note on the genus (*Flora British India*, vi. 106) states:—"The appendage between the gland of the pollinia and the pollinia itself is a very curious organ, and its real nature has not yet been ascertained, whether



Text-fig. 2.—Left.—*Zeuxine oblonga*, n. sp.
Right.—*Zeuxine attenuata*, n. sp.

rostellar or pollinar; it occurs only in some species and in these under very various forms, so that it cannot be relied on as a generic character. It is further so difficult of analysis in dried specimens, that much allowance must be made for my description of it."

The appendage referred to is figured in his *Icones Plantarum XXII.*, pl. 2173, figs. 4 and 5; also pl. 2174, fig. 5. This appendage is not present in the Australian *Z. oblonga*, but in this species there is a definite inflexion of the margins of the caudicle (as in pl. 2174), although the actual attachment of the pollinia to the lower end of the caudicle appears to be normal.

Such inflexion of the margins of the caudicle together with an abnormal attachment of the pollinia (as figured by him), Hooker regards as an early stage in the evolution of his "appendage."

***Zeuxine oblonga*, sp. nov.**

(Text-fig. 2).

Planta circiter 30 cm. alta. Caulis ascendens, gracilis. Folia 6 vel 7 alternata, elliptica vel oblonga-elliptica, 2.5-7.5 cm. longa; petioli basibus vagini-formes dilatati. Bractee 2, vel 3, sub-hirsutae, acuminatae, membranaceae, basibus vagini-formes dilatatae. Flores parvi, sessiles, extus hirsuti; spica 4-7.5 c.m. longa, mediocriter dense florifera. Sepalum dorsale cum petalis in galeam cohærente, circiter 3 mm. longum. Sepala lateralia libera, patentia, late lanceolata, 3-3.5 mm. longa, 1-nervosa. Labellum circiter 3 mm. longum inferum (interdum superum?) sessile; basi columnae adnatum brevissime; basi cymbiforme, in medio contractum deinde in apicem terminalem bilobatum abrupte dilatatum, alae oblongae divaricatae; intus bicallosum. Columna brevissima, antica (parte) bicarinata; anthera rostrata rostello aequans. Rostellum profunde bipartitum, erectum. Pollinia 2, ope caudiculae linearis glandulae longae lineari-ellipticae affixa. Stigmata 2, magna, lateralia.

Plants about 30 cm. in height, slender, with hairy stems on a creeping rhizome. Leaves six or seven, alternate on the lower half or third of the stem, the base of the petiole dilated into a loose membranous tubular sheath; elliptic to oblong-elliptic, 2.5-7.5 cm. long, with a tendency

Text fig. 2.—Plants natural size.

a. anther; *col.*, column; *g.* galea formed by the union of the dorsal sepal and the petals; *gl.*, gland; *lab.*, labellum; *l.s.*, lateral sepals; *ov.*, ovary; *r.*, rostellum; *s.*, stigma; all enlarged.

to become deciduous above the expanded portion of the petiole. Stem bracts two or three, slightly hairy, acuminate, membranous, forming a loose tubular sheath towards their bases. Flowers small, sessile, hairy on the outside, in a moderately crowded spike about 4-7.5 cm. long (occasionally reversed?); 3-3.5 mm. long (not including the ovary); bracts hairy awn-like, shorter than the ovary. Perianth segments nearly equal, the dorsal sepal connate with the petals to form a galea over the column. Lateral sepals free, broadly lanceolate, rather blunt, 3-3.5 mm. long, 1-nerved; galea erect on a wide base or slightly inclined forward, blunt, about 3 mm. long. Labellum inferior (occasionally superior?) sessile, adnate to the base of the column; cymbiform in its lower half, suddenly contracted about its middle, then abruptly dilated into a terminal expansion with two large divaricate entire oblong lobes; lamina traversed by three longitudinal lines or nerves, a claw-like callus on each side within the saccate portion near the base.

Column-bed very short, two-keeled anteriorly. Anther ovate-lanceolate behind the rostellum, rostrate, the beak reaching as high as the latter. Rostellum deeply bipartite; segments slender erect, surmounted by a long vertical linear-elliptical gland. Pollinia two, connected with the gland by a common linear caudicle with inflexed margins; gland readily detached from between the segments of the rostellum. Stigmas (stigmatic lobes) two, one on each side of the upper part of the column, separated by the base of the rostellum, relatively large.

Kamerunga (Barron River), *E. Cowley*; Mackay, *L. J. Nugent*; Daintree River, *Gus. Rosenstrom*.

In addition, there is one sheet containing several specimens, but with no particulars attached as to locality or name of collector.

This Australian orchid rather closely resembles the Asiatic species *Z. flava* Benth., of which it may possibly be a variety. In the material represented by it in the Queensland National Herbarium all the plants are old, and there is no information as to time of blooming. Some of the specimens are in a state of advanced seed, and the

dehiscence of the capsules has been completed. In these specimens the flowers are reversed. It is thought that this may be the result of torsion changes in the ovaries due to age and weathering, and should not be regarded as the normal condition.

Z. attenuata, sp. nov.

Materiae vitiosissimae.

Planta gracillima, 15-17.5 cm. alta. Radix tuberosa? Caulis hirsutus, gracillimus. Folia 2 vel 3, prope basin, ovata, 5-nervosa, reticulata; lamina circiter 1.5 cm. longa, 1 cm. lata; petioli interdum laminae aequantes, basibus vaginiformes dilatati. Bracteae 3 vel 4, acuminatae, circiter 4 mm. longae, membranaceae, basibus vaginiformes dilatatae.

Uniflos vel flores pauci; laxi-racemosi, extus hirsuti; pedicelli breves graciles. Sepala lateralia fere ovato-lanceolata, libera, circiter 5 mm. longa; sepalum dorsale cum petalis in galeam cohaerente; galea circiter 4 mm. longa. Labellum circiter 6 mm. longum, pellucidum, membranaceum, basi columnae adnatum; in parte infero anguste cymbiforme, 3 nervosum, intus 4-callosum biseriatum; ultra medium contractum, deinde in apicem terminalem bilobatum dilatatum, alae divaricatae cuneato-oblongae marginibus remotis laceratis. Columna brevissima, antica bicarinata. Rostellum profunde bipartitum, erectum, supra basin columnae circiter 3 mm. alta. Anthera anguste elongata rostello aequans

Plants very slender, apparently not exceeding 15-17.5 cm. in height. Root tuberous (?) with loose fibrous investment. Stems very slender, hairy. Leaves basal or very near the base, two or three, ovate, five-nerved, reticulated as in a dicotyledon; lamina about 1.5 cm. long and about 1 cm. wide; petioles sometimes equalling the lamina in length, dilated at their bases into loose transparent tubular (often imbricated) sheaths. Stem-bracts three or four, acuminate, about 11 mm. long, membranous, converted for some distance above their insertion into loose tubular sheaths. Flowers single, or in a few-flowered loose raceme; hairy on the outside, on short slender pedicels. Lateral sepals almost ovate-lanceolate, free, about 5 mm. long; dorsal sepal connate with the lateral petals to form a galea about 4 mm. long. Labellum about 6 mm. long, thin, membranous, adnate to the base of the column; the lower part narrowly cymbiform, 3-nerved, with four (or three?) linear calli on each side near the base; contracted beyond the middle into a wide bi-lobed apex, the lobes divaricate, cuneate-oblong with lacerated outer margins.

Column very short, bicarinate in front. Rostellum deeply bipartite, erect, its segments lanceolate, membranous, reaching about 3 mm. above the base of the column. Anther narrowly elongated, membranous as high as the rostellum. Stigmata two, rather small, lateral, at the base of the rostellum.

Mackay, *L. J. Nugent*, 13-9-1895.

The material available for examination is fragmentary ; no further specimens having apparently been gathered since Nugent collected the original material nearly twenty-five years ago.

The habit of the species is entirely different from that of the other Australian representative of the genus, the stem being exceedingly slender with basal leaves, and terminated by a single bloom or by two or three pedicellated flowers in a loose raceme ; whereas in *Z. oblonga* the stem is much stouter with alternate leaves distributed over its lower half or third and ending in a moderately-crowded spike of sessile flowers. Further, in the former the labellum is relatively much longer, more slender and narrow, with very different calli and with wider and differently-shaped terminal lobes. Owing to poverty of material, the structure of the pollinarium could not be definitely ascertained, but there is reason to suppose that it differs considerably in type (especially as regards connection between pollinia and gland) from that which prevails in *Z. oblonga*.

Indications point to a root of tuberous origin.



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