

ACONITUM OF THE HIMALAYA: II

L. A. LAUENER

ABSTRACT. One new species of *Aconitum*, *A. deltoideum* Lauener is described and other records listed. One species and one variety are reduced to synonymy.

INTRODUCTION

Several species of Himalayan *Aconitum* have already been described in previous papers* and the examination and identification of more specimens from the British Museum has elicited one new species. I do not hesitate to describe it as it is quite distinct. In addition there are miscellaneous notes on the other specimens, but the identification of a few is still uncertain. I hesitate to describe these as new species at this stage.

Aconitum deltoideum Lauener, sp. nov. Fig. 1.

Proximum *A. elliotii* Lauener a quo bracteis integris carpellis pilosis differt.

Tubera ignota. *Caulis* erectus ad 90 cm altus, superne pilosus, inferne mox glabratus. *Folia* infima ignota, superiora ambitu deltoidea late ovata, leviter cordata, vel truncata, supra glabra subtus ad nervos pilosa, ciliata, 10–12 cm longa ad 10–11 cm lata ad 2.5–3 cm supra basin tripartita, segmento intermedio rhomboideo basi late cuneato, trilobato, segmentis lateralibus inaequaliter bilobis, omnibus grosse serrato-dentatis dentibus latiusculis apiculatis; petioli inferiores 7–10 cm longi, superiores 1 cm longi. *Inflorescentia* racemosa, laxa, ad 36 cm longa, foliata, patule pilosa; bractee sessiles, conspicuae, subintegerrimae, ovatae, 3–4 × 1 cm, lobulis basalibus munitae, subtus ad nervos pubescentiae, ciliatae; pedicelli 2–10 cm longi. *Sepala* purpurea, patule pilosa; cassis galeata, margine inferiore recto, 2.2 cm alta 1.5 cm lata, 2 cm a basi ad apicem rostri metiens; sepala lateralibus oblique obovata, 1.5 cm longa 1.6 cm lata, inferiora elliptica 1.1 cm longa, 3.5 mm lata, deflexa. *Petala* glabra, 2.2 cm longa, unguibus vix inclinatis, calcaribus apice globosis vix recurvis, laminis emarginato-bilobis. *Stamina* 5–8 mm longa, glabra, supra medium filiformia. *Carpella* 5, dense pilosa, 3 mm longa in stylis 1 mm longos producta. *Folliculi seminaeque* ignota.

E NEPAL. Milke Danda, 27° 15' N, 87° 30' E, 2900 m, height 5 ft, among shrubs, flowers rich purple, 8 ix 1967, Williams & Stainton 8414 (holo. BM).

A. deltoideum most closely approaches *A. elliotii* in leaf shape and form but the latter has a much looser inflorescence, divided bracts and glabrous carpels.

In respect of its bracts, *A. deltoideum* is related to a group of four species with entire or almost entire bracts, *A. nagarum* Stapf, *A. bullatifolium* Lévl., *A. duclouxii* Lévl. and *A. hicksii* Lauener. Three of these species also contain varietal taxa. In endeavouring to key out all five species I found difficulty in distinguishing *A. nagarum* var. *heterotrichum* Fletcher & Lauener from *A. bullatifolium*, and apart from minor differences in the leaves and in the size of the petals they are more or less identical. *A. nagarum* and *A. bullati-*

* Notes R.B.G. Edinb. 25: 1–30 (1963); op. cit. 26: 1–10 (1964).

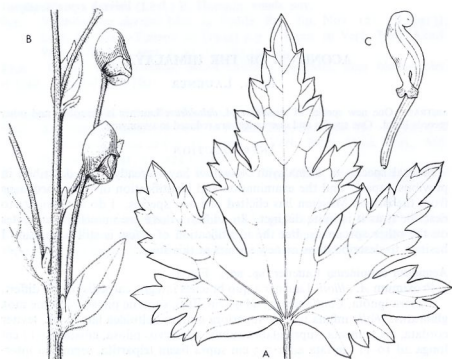


FIG. 1. *Aconitum deltoideum* Lauener: A, leaf $\times \frac{1}{2}$; B, part of inflorescence $\times 1$; C, petal $\times 2$.

folium are themselves closely related, differing mainly in indumentum. I accordingly reduce var. *heterotrichum* to synonymy below.

A. bullatifolium Lévl., Cat. Pl. Yunnan 218 (1917).

Syn.: *A. nagarum* Stapf var. *heterotrichum* Fletcher & Lauener in Notes R.B.G. Edinb. 20: 203 (1950) syn. nov.

The varieties of *A. nagarum*, *A. bullatifolium* and *A. duclouxii* can now be encompassed within the key for the five species as follows.

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|----|---|-------------------------|
| 1. | Leaves not divided to the base. Bracts with one or two basal lobes but not lobed or toothed in the upper part | <i>A. deltoideum</i> |
| + | Leaves divided to or almost to the base. Bracts not lobed at base, occasionally toothed in the upper part | 2 |
| 2. | Indumentum short, white, crispulous. Carpels minutely pubescent | <i>A. nagarum</i> |
| + | Indumentum heterotrichous, golden yellow, spreading. Carpels very hairy | 3 |
| 3. | Leaves with broad-cuneate segments; lobes acute or ovate | 4 |
| + | Leaves lacinate with narrow-cuneate segments; lobes linear, narrow | <i>A. duclouxii</i> |
| 4. | Leaves more than 11 cm broad; petiole of basal leaves about 20 cm long or more | <i>A. bullatifolium</i> |
| + | Leaves 6-8 cm broad; petiole of basal leaves up to 12 cm long | <i>A. hicksii</i> |

MISCELLANEOUS NOTES AND RECORDS

Aconitum aff. *angulatum* Tamura in Acta Phytotax. Geobot. 23: 100 (1968) e descr.

CENTRAL NEPAL. Bimtakothi, 3800 m, among dwarf *Rhododendron* on overgrown moraine, flowers greyish white, stems stained pink, up to 3 ft, 25 viii 1950, *D. G. Lowndes* 1442 (BM).

Aconitum bhedingense Lauener in Notes R.B.G. Edinb. 25: 26 (1963).

EASTERN NEPAL. Junbesi, 27° 35' N, 86° 32' E, 3050 m, on open slopes, flowers mauve, 27 ix 1969, *Stainton* 6556 (BM).

Previously known only from the type locality of Bheding in Central Nepal. The present collection is remarkable for the presence of quite distinct bulbils which are not evident in the type. As far as I am aware the phenomenon of bulbils in *Aconitum* is known only in one other species, *A. bulbiferum* Hand.-Mazz.

Aconitum gammiei Stapf in Kew Bull. 1907: 56 (1907).

EASTERN NEPAL. Milke Danda, 3800 m, delicate light blue flowering species growing up through dwarf rhodos, in open moorland, 9 x 1971, *Beer, Lancaster & Morris* 10159 (BM); Tulo Thorme, 27° 33' N, 87° 29' E, 4300 m, fleurs blanches, landes, 23 viii 1972, *Dobremez* 1694 (BM).

Aconitum heterophylloides (Brühl) Stapf var. *leucanthum* (Brühl) Lauener in Notes R.B.G. Edinb. 26: 331 (1965).

EASTERN NEPAL. Topke Gola, 27° 42' N, 87° 35' E, 3900 m, forêt de *Rhododendron*, fleurs bleues pâles et blanches, 25 viii 1972, *Dobremez* 1713 (BM); Topke, 3650 m, along river, stem slender weak, perianth white, margin purplish blue, honey gland purple, anthers deep purple, pollen white, 30 vii 1971, *Shrestha & Joshi* 377 (BM).

Aconitum hookeri Stapf in Ann. Roy. Bot. Gard. Calc. 10: 147 (1905).

EASTERN NEPAL. Khumbu, Everest base camp, 27° 56' N, 86° 48' E, 4870 m, on old moraine, flowers deep blue, 7 x 1969, *Stainton* 6594 (BM); Tulo Thorme, 27° 33' N, 87° 29' E, 4300 m, pelouses, fleurs bleues, 23 viii 1972, *Dobremez* 1683 (BM).

Aconitum laciniatum (Brühl) Stapf in Ann. Roy. Bot. Gard. Calc. 10: 168 (1905).

CENTRAL NEPAL. Gamja La (Langtang), 28° 10' N, 85° 31' E, 4100 m, amongst alpine shrubs, flowers mauve, 14 ix 1970, *Stainton* 6678 (BM).

EASTERN NEPAL. Khumbu, Thyangboche, 27° 50' N, 86° 48' E, 3800 m, amongst shrubs, height up to 4 ft, flowers mauve, 4 x 1969, *Stainton* 6577 (BM, E).

These two collections are placed under *A. laciniatum* with some dubiety. *Stainton* 6678 has the petals slightly hairy at the margin, glabrous stamens and appressed-hairy carpels. *Stainton* 6577 has glabrous petals and stamens and densely spreading-hairy carpels. All three organs are usually hairy in typical *A. laciniatum*.

Aconitum nepalense Lauener in Notes R.B.G. Edinb. 25: 24 (1963).

CENTRAL NEPAL. Baraha Pokhri ridge, 3960 m, open grassy places, flowers dark blue-purple, 19 ix 1950, *D. G. Lowndes* 1530 (BM).

Aconitum spicatum (Brühl) Stapf in Ann. Roy. Bot. Gard. Calc. 10: 165 (1905).

CENTRAL NEPAL. Gang Chen, 4 ix 1935, *F. M. Bailey's collectors* 24 (BM); Gomoten Tang, 6 ix 1935, *F. M. Bailey's collectors* 20 (BM); Dhimsa, 18 ix 1935, *F. M. Bailey's collectors* 6 (BM). The Bailey specimens are not very adequate but seem to belong here.

EASTERN NEPAL. Milke Danda, 3350 m, plant with purple flowers, white within, growing on an open rocky bank, up to 3 ft tall, 3 x 1971, *Beer, Lancaster & Morris* 10058 (BM).

Aconitum wallichianum Lauener in Notes R.B.G. Edinb. 25: 30 (1963).

CENTRAL NEPAL. Ganja La (Langtang), 28° 10' N, 85° 31' E, 4110 m, amongst alpine shrubs, flowers white marked with pale blue, "the roots of this species are not poisonous and are used as medicine for the stomach", 14 ix 1970, *Stainton* 6679 (BM).

Aconitum nakaoui Tamura in Acta Phytotax. Geobot. 19: 73 (1962).

Syn.: *A. parabrachypodium* Lauener in Notes R.B.G. Edinb. 25: 7, figs. 1E, 2E (1963), syn. nov.

In the protologue of *A. hicksii* (1963), I recorded the fact that I thought it might be closely related to *A. nakaoui*. Dr Tamura, however, drew my attention to the similarity between *A. parabrachypodium* from Bhutan, Tibet and Assam and *A. nakaoui* from Bhutan, and sent photographs of his species.

The habit and appearance of these two species is very close and as there are some differences and variations in the degree of hairiness of the petals and stamens within both species, it seems better to combine them.