

NOTES FROM THE ROYAL BOTANIC GARDEN EDINBURGH

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NEW SPECIES AND RECORDS OF ACONITUM OF NEPAL

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BETWEEN 1952 and 1956, collectors such as Stainton, Polunin, Sykes and Williams made various expeditions to Nepal. Their collections of *Aconitum* have produced 6 new species which are described below. In addition to species already known from Nepal they have also collected other Indian species not previously recorded from Nepal.

It is interesting to note that of the 7 specimens collected by Stainton in Eastern Nepal, only 1 represents a new species whereas those collected in Central and Western Nepal contain a greater proportion of new taxa. Of 23 specimens, 9 represent 5 new species and 14 are referable to existing species.

The indication would seem that whilst specimens from Eastern Nepal are identifiable with species already described from east of that area, those from Central and Western Nepal may show a higher degree of endemism. They all occur in the "region of transition" mentioned in Dr. W. T. Stearn's paper [Bull. Brit. Mus. (Nat. History) Botany, 2: No. 6 (1960)]. Stearn, writing of *Allium*, says . . . "in the area between 80° and 84°E. climatic factors presumably limit the capacity of plants suited to the one province to compete with those of the other and hence here is an area of interpenetration and limitation. The earlier view of very high local endemism reflected inadequate collecting".

The sub-divisions of Nepal as outlined by Stearn, are followed here in the citation of *exsiccatae*.

As in the previous paper [Notes R.B.G. Edinb. 25: 1-30 (1963)], the leaves, hooded sepals and petals of the new species are illustrated. The general facies of the leaves and petals is often so similar it is difficult to distinguish them completely or satisfactorily in terms of Latin descriptions. Only rarely are leaves so distinct as to be easily recognisable in themselves, as in *A. heterophyllum* [Wall. ex] Royle, *A. naviculare* Stapf, *A. calthifolium* H. F. Comber or *A. racemulosum* Franch., or the petals, as in *A. novoluridum* Munz or *A. bisma* (Ham.) Rap.

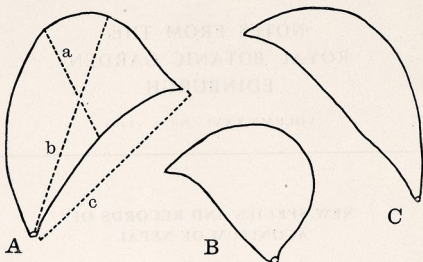


FIG. 1. Posterior sepals in *Aconitum*: A, showing measurements referred to in text; a, breadth; b, altitude; c, base to apex. B & C, sepal shapes; B, galeate; C, navicular.

In the descriptions which follow, three measurements of the whole of the posterior sepal or helmet are given. These are (a) the breadth, at the widest part of the sepal from the top to the lower margin; (b) the altitude, from the base of the sepal where it is attached to the receptacle to the upper curved edge and (c), the distance between the base and the beak. The direction and manner in which these measurements are taken is illustrated in Fig. 1, A. In addition to measurement, the terms "galeate" and "navicular" are employed to convey the visual impression of the shape of the helmet, and Figures 1B and 1C show examples of these shapes.

ACKNOWLEDGEMENTS

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THE SESSILIFLORUM COMPLEX

Aconitum tamuranum Lauener, *sp. nov.* (Figs. 2, A; 3, A).

Proximum *A. hicksii* Lauener a quo bracteis bracteolisque dentatis vel serratis vel linearibus carpellis albo-sericeis nec aureo-hirsutis differt.

Tubera parva, cylindrica, ad 2 cm longa, 5 mm crassa. *Caulis* erectus, simplex, foliatus, ad 45 cm altus, patenter aureo-pilosus. *Folia* utrinque parce pilosa, ambitu orbicularia, cordata 6–8 cm longa et lata, fere ad basin 3–5 partita, segmentis ovatis, cuneatis, interioribus profunde tripartitis, segmentis lateralibus bipartitis, partibus omnibus lobatis, lobis oblongis vel lanceolatis acutis; petioli foliorum inferiorum 6–10 cm longi, ceteri breviores. *Inflorescentia* erecta, ad 15 cm longa, racemosa, dense patenter aureo-villosa; bractee subsessiles folia referentes; bracteolae serratae vel lineares; pedicelli pilosi ad 3 cm longi, apice in discum 3 mm dilatati. *Sepala* caerulea, extra leviter pilosa; cassis galeata, 1.3 cm alta, 0.8 cm lata, 1.5 cm a basi ad apicem rostri brevis metiens; sepala lateralalia ovata, 12 mm longa, 8 mm lata; sepala inferiora elliptica, 8 mm longa, 4 mm lata. *Petala* glabra, 1.8 cm longa, unguibus leviter inclinat, calcaribus subglobosis vix curvatis, laminis inflexis emarginatis. *Stamina* 6 mm longa, glabra, usque ad medium alata, edentata, superne filiformia. *Carpella* 3–5, albo-sericea, 5 mm longa in stylis brevissimos attenuata. *Folliculi* seminaque ignota.

WESTERN NEPAL. Thakurji Lekh, S. of Jumla, 3960 m, on open slopes, perianth dark blue with darker veins, 20 vii 1952, *Polunin, Sykes & Williams* 4798 (holo. BM); Chakure Lagna, 3960 m, on grassy slopes, amongst mixed herbaceous species, flowers pale blue, tips of sepals yellowish, sepals veined with darker blue, 13 viii 1952, *Polunin, Sykes & Williams* 423 (BM).

The upper bracts and bracteoles of *A. hicksii* are ovate and entire whilst those of *A. tamuranum* are leaf-like and linear. The stalk of the petal in the former species is much more slender and more reflexed than in *A. tamuranum*, which also differs in the type of vestiture on the carpels. In addition, the leaves of *A. tamuranum* are pilose, whilst those of *A. hicksii* are glabrous.

I have named this species in recognition of Dr. Michio Tamura's work on the *Ranunculaceae* of Eastern Asia.

Aconitum balangrense Lauener, *sp. nov.* (Figs. 2, B; 3, B).

Proximum *A. tamurano* Lauener a quo inflorescentiis longioribus pedicellis brevioribus carpellis glabris differt.

Tubera imperfecta. *Caulis* erectus, plus minusve ramosus, ad 100 cm altus, superne dense patenter villosus, inferne pilosus. *Folia* infima sub anthesi emortua, intermedia cordata, suborbicularia, 6 cm longa, 8 cm lata, ad 1 cm supra basin tripartita, segmento medio 6 cm longo, 4 cm lato, late cuneato, tripartito, segmentis lateralibus inaequaliter bipartitis, omnibus grosse dentato-lacinatis, laciniis oblongo-acuminatis, utrinque pilosa; petioli infimi ad 15 cm longi, superiores 1–3 cm longi. *Inflorescentia* paniculata ad 30 cm longa, dense patenter aureo-villosa, floribus ad caulem appressis, ramis infimis 4–8 cm longis paucifloris; bractee sessiles inferiores folia referentes superiores dentatae; bracteolae integrae lineares; pedicelli pilosi, 5 mm longi. *Sepala* extra sordido-purpurea, intus viridi-purpurea; cassis subnavicularis glabra praeter marginem inferiorem ciliatam, 1.2–1.5 cm alta, 6 mm lata, 1.5 cm a basi ad apicem rostri brevis metiens, rostro piloso; sepala lateralalia

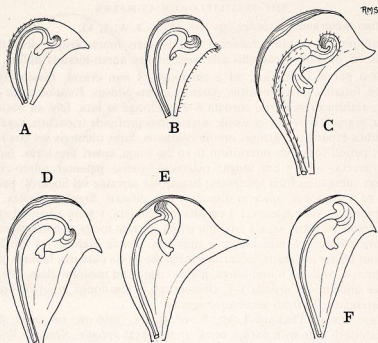


FIG. 2. Sepals & petals of *A. Aconitum tamuranum*; B, *A. balangrense*; C, *A. staintonii*; D, *A. williamsii*; E, *A. poluninii*; F, *A. amplexicaule*. All $\times 2$.

obovata 1 cm longa et lata, inferiora elliptica 8 mm longa, 3-4 mm lata, praesertim partibus exterioribus marginibusque pilosa. *Petala* glabra, 1.8 cm longa, unguibus ad limbum valde inclinatis, calcaribus subglobosis vix recurvatis, laminis emarginatis. *Stamina* glabra, 7 mm longa, inferne alata edentata, supra medium filiformia. *Carpella* glabra, 2.5 mm longa, in stylos 1 mm longos producta. *Folliculi* seminaeque ignota.

WESTERN NEPAL. Near Balangra Pass, 3960 m, *Rhododendron* and *Betula* slopes, flowers dull purple outside, greenish purple inside corolla, stamens with dark purple anthers, 22 vii 1952, *Polunin, Sykes & Williams* 2545 (holo. BM).

This species differs from *A. tamuranum* in the longer inflorescence, glabrous carpels and hairier leaves. The two latter characters and the nature of the bracteoles separate *A. balangrense* from *A. hicksii*.

THE STYLOSUM COMPLEX

Aconitum staintonii Lauener, sp. nov. (Figs. 2, C; 3, C).

Proximum *A. longipedicellato* Lauener a quo floribus maioribus pedicellis lanatis differt.

Tubera imperfecta, c. 1 cm crassa. *Caulis* erectus, 120 cm altus, superne puberulus inferne mox glabratus. *Folia* infima sub anthesi emortua, intermedia ambitu cordato-orbicularia vel cordato-ovata, ad 7 cm longa, ad 10 cm lata, supra strigosa, subtus ad venas pubescentia praesertim, ad $2/3$ tri-partita,

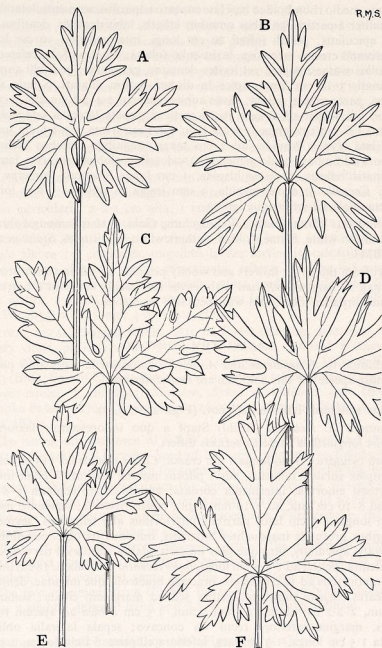


FIG. 3. Leaves of A, *Aconitum tamuranum*; B, *A. balangrense*; C, *A. staintonii*; D, *A. amplexicaule*; E, *A. poluninii*; F, *A. williamsii*. All $\times \frac{2}{3}$.

segmento medio rhomboideo basi late cuneato tripartito, segmentis lateralibus inaequaliter 2-partitis, partibus omnibus lobatis, lobis dentatis, dentibus late ovatis apiculatis; petioli infimi 20 cm longi, intermedii ad 10 cm longi. *Inflorescentia* erecta, racemosa, laxiuscula, foliata; bracteae folia referentes; bracteolae ovatae integrae vel leviter dentatae, petiolatae; pedicelli superne fere lanati, 3–10 cm longi, apice in discum 3 mm dilatati. *Sepala* albo-caerulea, parce pilosa, ciliata; cassis subnavicularis, 2.4–2.6 cm alta, 1.3 cm lata, 2.7 cm a basi ad apicem rostri metiens; sepala lateralalia late oblique obovata, 1.6–1.9 cm longa, 1.6 cm lata; inferiora ovata 1.4–1.6 cm longa, 6 mm lata. *Petala* hispida, ad 2 cm longa, unguibus tenuibus inclinatis (interdum ad limbum paulo geniculatis), calcaribus globosis recurvis, laminis emarginatis reflexis. *Stamina* hispida, 1 cm longa, edentata, superne filiformia. *Carpella* 5, dense hispida, 9 mm longa in stylos 1.5 mm longos producta. *Folliculi* seminaque ignota.

EASTERN NEPAL. Tamur Valley, Walungchung Gola, 3510 m, amongst shrubs, corolla bluish white, filaments blue, anthers white, 18 vii 1956, *Stainton* 1034 (holo. BM).

Apart from the larger flowers and woolly pedicels, *A. staintonii* is a stouter plant than *A. longipedicellatum* with leaves less deeply cut with a narrower sinus and broader lobes, and with petiolate bracteoles.

LACINIATUM COMPLEX

In addition to *A. nepalense* and *A. dhwojii* described in a previous paper, three more species of this complex are now described.

Aconitum williamsii Lauener, *sp. nov.* (Figs. 2, D; 3, F).

Proximum *A. laciniato* (Brühl) Stapf a quo inflorescentiis laxioribus pedicellis longioribus carpellis sericeis differt.

Tubera cylindrica 6 cm longa 1 cm crassa. *Caulis* erectus ad 115 cm altus, fere simplex sursum ramosus, curvi pilosus inferne glabratus. *Folia* infima sub anthesi emortua, intermedia cordata, ambitu suborbicularia 5–8 cm longa ad 8–10 cm lata, ad 7–10 mm supra basin tripartita, segmento medio 5–8 cm longo 4–5 cm lato, partibus interioribus alte tripartitis, segmento exterioribus profunde inaequaliter bipartitis, omnibus partibus paucilobatis lobis ovatis apiculatis, utrinque plus minusve glabra subtus ad nervos parce puberulentia; petioli ad 1.5–5 cm longi. *Inflorescentia* paniculata, 18 cm longa, ramis inferioribus ad 12 cm longis; bracteae bracteolaeque minutae, dentatae vel lineares. *Sepala* purpurea, glabra sed ad marginem ciliata; summum galeatum, 2.2–2 cm altum, 1.5 cm latum, 1.5 cm a basi ad apicem rostri metiens, margine inferiore recto vix concavo; sepala lateralalia oblique obovata 1.5 cm longa, 1.3 cm lata, inferiora elliptica 1.2 cm longa, 0.5 cm lata, deflexa. *Petala* glabra, calcaribus apice globosis vix recurvis, unguibus valde inclinatis interdum ad limbum leviter geniculatis laminis reflexis emarginatis. *Stamina* 8 mm longa, inferne alata edentata vel bidentata supra medium filiformia, filamenta parce pilosa. *Carpella* 3–5, albo-sericea, 2 mm longa in stylos 1 mm longos producta. *Folliculi* seminaque ignota.

CENTRAL NEPAL. N.W. of Gurjakhani, 3275 m, edge of forest, flowers deep mauve, 19 ix 1954, *Stainton*, *Sykes* & *Williams* 4483 (holo. BM).

Aconitum amplexicaule Lauener, *sp. nov.* (Figs. 2, F; 3, D).

Proximum *A. laciniato* (Brühl) Stapf a quo inflorescentiis laxioribus, pedicellis longioribus, petalis genitaliisque glabris differt.

Tubera cylindrica vel dauciformia, 6 cm longa, 1 cm crassa. *Caulis* erectus c. 75 cm altus (120 cm in cultu) parce puberulentia. *Folia* basalia sub anthesi emortua, inferiora ambitu cordato-orbicularia, ad 12 mm supra basin tripartita, segmento medio tripartito, 5–6 cm longo, 3–4 cm lato, cuneato, lateralibus c. 5 cm longis et latis profunde et inaequaliter 2-partitis, omnibus profunde lobatis lobis lanceolatis acuminatis, utrinque pilosa, ciliata; folia superiora amplexicaulia, sessiles, ceterum similes; petioli 6–9 cm longi parce pilosi. *Inflorescentia* racemosa (vel paniculata) glabra; pedicelli violacei 2–5 cm longi, apice in discum ad 5 mm latum dilatati; bractee foliis superioribus similes; bracteolae integrae, lineares. *Sepala* nitido-violacea, glabra; cassis navicularis, 2–2.3 cm alta, 1 cm lata, 2 cm a basi ad apicem rostri brevis metiens; sepala lateralibus vix unguiculata suborbiculata, late obovata, 1.5 cm longa et lata, inferiora elliptica, 1.2 cm longa, 6 mm lata, deflexa. *Petala* glabra 1.7 cm longa, unguibus leviter inclinatis, calcaribus breviter deflexis dorso gibbosis, laminis emarginatis, reflexis. *Stamina* 5–8 mm longa glabra, edentata vel interdum dentata, supra medium filiformia. *Carpella* 3–5, glabra, 2.5 mm longa, in stylos 1.5 mm longos producta. *Folliculi* (in S.S.W. 4653) 1 cm longi, 4 mm lati, glabri.

CENTRAL NEPAL. Dogadi Khola, 3810 m, forest clearings near river, flowers glossy violet, pedicels violet, 7 viii 1954, *Stainton, Sykes & Williams* 3780 (holo. BM), forest clearings, 3810 m, 30 ix 1954, *Stainton, Sykes & Williams* 4653 (BM); East of Chalike Pahar, 4115 m, among tall herbaceous vegetation, flowers violet, 5 viii 1954, *Stainton, Sykes & Williams* 3751 (BM); nr. Chalike Pahar, 4270 m, grass slopes, 26 ix 1954, *Stainton, Sykes & Williams* 4611 (BM).

The herbarium specimen of S.S.W.4653 is a fruiting one and obviously identifiable with S.S.W.3780. Seed of No. 4653 was sent to Edinburgh and plants have been in cultivation for some years. The cultivated plant, however, presents a different aspect from the herbarium specimen, having a many branched panicle with some 20 or more lower branches up to 20 cm in length as against 2 at most on the herbarium specimen. Furthermore, the inflorescence is about 60 cm long in cultivation.

Plants of S.S.W.4653 from different parts of the garden all exhibit the glossy violet flowers and clasping upper leaves, but only one has a highly polished, violet-coloured stem, and this on one side only.

The two specimens from Chalike Pahar are included here although they show a slightly different habit and S.S.W.4611 has hairy follicles.

Aconitum poluninii Lauener, *sp. nov.* (Figs. 2, E; 3, E).

Proximum *A. laciniato* (Brühl) Stapf a quo inflorescentiis longioribus bracteis integris petalis staminibusque glabris differt.

Tubera ignota. *Caulis* erectus, rubiginosus, ramosus, ad 70 cm altus, superne dense patenter pilosus, inferne mox glabratus. *Folia* infima sub anthesi emortua, intermedia cordata, suborbicularia, 6 cm longa, 9 cm lata, ad 7 mm supra basin tri-partita segmento medio 5–6 cm longo et 4 cm lato, tripartito, lateralibus 5 cm longo, profunde inaequaliter 2-partitis, omnibus

grosse dentato-lacinulatis, lacinulis ovatis, utrinque glabra vel subtus ad nervos parce puberulentia; petioli ad 6 cm longi. *Inflorescentia* paniculata ad 50 cm longa, ramis inferioribus ad 15 cm longa, bracteae omnes praeter inferiores integrae, lanceolatae; bracteolae similes; pedicelli 1.5-5 cm longi. *Sepala* caerulea, leviter puberulentia, cassis galeata, ad 1.8-2 cm alta, ad 1 cm lata, ad 2 cm a basi ad apicem rostri metiens, rostro 5 mm longo; sepala lateralia obovata, 1.5 cm longa et lata, inferiora elliptica, deflexa, 1.5 cm longa. *Petala* glabra, 2 cm longa, unguibus ad summum inclinatis, calcaribus apice globosis recurvis, laminis reflexis emarginatis. *Stamina* 8-9 mm longa, glabra, inferne alata edentata supra medium filiformia. *Carpella* 3-5, dense pilosa, 3 mm longa in stylos 2 mm longos producta. *Folliculi* seminaeque ignota.

WESTERN NEPAL. Between Mugu and Purana, Mugu, Mugu Khola, 3810 m, open places in coniferous forest, stems reddish, leaves paler green beneath, perianth rich blue, 20 viii 1952, *Polunin, Sykes & Williams* 5338 (holo. BM).

A. amplexicaule and *A. williamsii* although very similar, are immediately distinguishable from each other by the hairy carpels and the galeate helmet of *A. williamsii*. The helmet in *A. amplexicaule* is navicular. The glabrous carpels of *A. amplexicaule* distinguish it from *A. poluninii* which in turn can be separated from *A. williamsii* by the longer but less branched inflorescence, and by the bracts. *A. amplexicaule* is akin to *A. dhwojii* in the glabrous genitalia but differs in the smaller flowers and less dissected leaves.

The table below summarises the main distinguishing features of *A. laciniatum* and the five, closely allied, newer species.

Of the six species *A. laciniatum*, *A. nepalense* and *A. dhwojii* have been collected in proximity to one another near the eastern boundary of Central Nepal between 85° and 86° longitude. *A. williamsii* and *A. amplexicaule* are both found just east of 83° longitude, i.e., at the western end of Central Nepal. *A. poluninii* stands alone in Western Nepal at 82°30' long., approximately the same longitude as localities for *A. tamuranum*, *A. wallichianum* and *A. spicatum*, but considerably further north.

<i>Species</i>	<i>Distribution</i>	<i>Helmet</i>	<i>Petals</i>	<i>Stamens</i>	<i>Carpels</i>
<i>laciniatum</i>	C. Nepal Sikkim Bhutan Tibet	galeate	hispid	hispid	densely pubescent
<i>nepalense</i>	C. Nepal	navicular	hispid	glabrous	densely hirsute
<i>dhwojii</i>	C. Nepal	galeate	glabrous	glabrous	glabrous
<i>williamsii</i>	C. Nepal	galeate	glabrous	sparsely pilose	sericeous
<i>amplexicaule</i>	C. Nepal	navicular	glabrous	glabrous	glabrous
<i>poluninii</i>	W. Nepal	galeate	glabrous	glabrous	densely pilose

It is not improbable that more collections from the intervening areas between these species of the "*laciniatum*" complex, might show them to be one polymorphic species stretching across Nepal. The different behaviour and appearance in cultivation of *A. amplexicaule* adds strength to this probability. Nevertheless, with so little cultivated material available, taxonomic judgment must be based on collections from the wild.

MISCELLANEOUS NOTES AND RECORDS

***Aconitum ferox* [Wall. ex.] Sér.**

CENTRAL NEPAL. Tattewati, 2130 m, among hills, height 2-3 ft, perianth blue, 12 x 1954, *Stainton, Sykes & Williams* 8902 (BM).

This species is confined mainly to Nepal and to my knowledge has only once been collected outside Nepal. S. Nakao found it on the Pele La in Bhutan in 1958 and a photograph of the herbarium specimen sent to me by Dr. M. Tamura certainly seems to confirm its identification as *A. ferox*.

***Aconitum heterophyllum* [Wall. ex.] Royle**

CENTRAL NEPAL. Tukucha (Kali Gandaki), 3200 m, amongst shrubs on grass, height 3-4 feet, corolla greenish blue marked with red, filaments pale green, anthers brown, 26 viii 1954, *Stainton, Sykes & Williams* 7466 (BM); Tukucha (Kali Gandaki), 3200 m, amongst tall herbs, underside of leaf pale green, seed-pods green, 24 ix 1954, *Stainton, Sykes & Williams* 8005 (BM); S.W. of Gurjakhani, 3200 m, river bed forest, 4 feet, 18 x 1954, *Stainton, Sykes & Williams* 9081 (BM).

A. heterophyllum is a very distinct and quite common species in the N.W. Himalaya. These three collections are probably the first of this species gathered as far east as 83° longitude.

***Aconitum hookeri* Stapf**

EASTERN NEPAL. Arun Valley, Wabak Khola, E. of Num, 4570 m, on open slopes, corolla and filaments dark blue, 12 viii 1956, *Stainton* 1333 (BM).

Previously recorded from Bhutan, Sikkim and Tibet and now extended into E. Nepal.

***Aconitum novoluridum* Munz**

EASTERN NEPAL. Tamur Valley, Kambachen, E. of Walungchung Gola, 4270 m, on open slopes, corolla and filaments purplish red, 30 vii 1956, *Stainton* 1152 (BM).

***Aconitum orochryseum* Stapf**

NEPAL. Lamjung Himalaya, Rambrong, 4420 m, on open slopes, height 1-2 feet, flowers white with very faint purple veins, 7 vii 1954, *Stainton, Sykes & Williams* 6212 (BM); Lamjung Himalaya, 4570 m, on open slopes, flowers white, 11 vii 1954, *Stainton, Sykes & Williams* 6299 (BM).

These two specimens are included here although the leaves are more dissected and the petals and stamens, although hairy, do not possess the copious indumentum these organs usually have in *A. orochryseum*.

***Aconitum pulchellum* Hand.-Mazz.**

EASTERN NEPAL. Tamur Valley, Kambachen, E. of Walungchung Gola,

4270 m, on open slopes, corolla and filaments blue, anthers white, 30 vii 1956, *Stainton* 1151 (BM).

The distribution of *A. pulchellum*, previously referred to in Notes R.B.G. Edinb. 25: 10, 1963, is extended even further westward into Nepal. To my knowledge this is the only species which occurs in both Western China and Nepal.

***Aconitum rotundifolium* Kar. & Kir.**

CENTRAL NEPAL. Thinigaon (N. of Tukucha), Kali Gandaki, 4420 m, open stony slopes, corolla pinkish mauve, bottom of leaf light green, 28 ix 1954, *Stainton, Sykes & Williams* 8033 (BM).

Originally described from Alatau and descending through Turkestan, Afghanistan and Kashmir to the Western Himalaya, the distribution of *A. rotundifolium* is now extended further eastwards into Central Nepal.

***Aconitum spicatum* (Brühl) Stapf**

WESTERN NEPAL. Ratamata, 3650 m, growing among mixed herbaceous vegetation near old encampment, plant 5-7 feet high, flowers dark blue, anthers dark bluish purple, 13 viii 1952, *Polunin, Sykes & Williams* 411 (BM); Devli Patan, S.E. of Jumla, 3200 m, growing on open slopes, among shrubs, height up to 5 feet, perianth dull purple, 4 ix 1952, *Polunin, Sykes & Williams* 3158 (BM).

CENTRAL NEPAL. Taglung (S. of Tukucha), Kali Gandaki, 3650 m, in wood, height up to 5 feet, corolla violet blue, filaments white, anthers black, bottom of leaf light green, 20 ix 1954, *Stainton, Sykes & Williams* 7936 (BM); Annapurna Himal., 3650 m, on open slopes, height 4-5 feet, flowers blue, 17 ix 1954, *Stainton, Sykes & Williams* 8463 (BM); S.W. of Gurjakhani, 3275 m, near upper forest limit in sheltered areas, plant to 5 feet, 18 x 1954, *Stainton, Sykes & Williams* 9082 (BM).

EASTERN NEPAL. Arun Valley, Popti La, N. of Hattiar, 3810 m, on open slopes, height 3 feet, corolla, filaments and anthers mauve, 22 viii 1956, *Stainton* 1423 (BM).

Although this species has been previously recorded from Nepal (Notes R.B.G. Edinb. 25: 24, 1963) the first two collections cited here form a considerable westward extension of this species.

***Aconitum violaceum* [Jacquem. ex.] Stapf**

CENTRAL NEPAL. Nr. Chalike Pahar, 4420 m, abundant on grassy slopes, flowers violet, 6 viii 1954, *Stainton, Sykes & Williams* 3765 (BM).

A. violaceum is a high alpine species extending from Gilgit, south through Kashmir where it is quite common, Chamba, Lahul and Bashahr, and now eastwards to Central Nepal.

***Aconitum wallichianum* Lauener**

CENTRAL NEPAL. Goma Ten Tang, 3350 m, 6 ix 1935, *F. M. Bailey's Collectors* 19 (BM).

WESTERN NEPAL. Giri Daha, S. of Jumla, 3350 m, growing in sand beside river, perianth blue, anthers purple, pollen white, 19 vii 1952, *Polunin, Sykes & Williams* 4780 (BM).

EASTERN NEPAL. Arun Valley, Barum Khola, N.W. of Num, 3510 m, amongst shrubs, corolla and filaments mauvish pink, 17 ix 1956, *Stainton* 1675 (BM).