

punctulis albidis inspersa, 14—16 cm longa, 9—10 cm lata, nervi supra haud prominentes, venulae bene reticulatae prominulae, subtus medianus et nervi adscendentes, prope marginem arcuatim conjuncti valde prominentes, venae et venulae prominulae, petiolulus crassus 13—20 mm longus; panicula elongata, angusta, 22—25 cm longa, rhachis crassa, teres, aequae ac rami breves, erecti, calyx et corolla brevissime dense tomentella; calyx crassus, durus, perfecte truncatus, glandulis multiseriatis inspersus, 8—9 mm longus, corolla coriacea, versus basin valde curvata, (ex collectore) alba, tubuloso-infundibuliformis, 6 cm longa, lobis late obovatis, 1,5 cm circ. longis.

Hylaea: Rio Aiary: In Pflanzung neben Maloka (No. 74 — XII. 03).

Die neue Art ist verwandt mit *D. guianensis* Bur. et K. Schum., aber besonders in den Blättern verschieden durch die völlige Kahlheit, die stärkere Nervatur und die scharf abgesetzte, stumpfe, drüsentragende Spitze.

XLIII. George Forrest, *Gentianaceae* novae Orienti-Tibeticae atque Austro-occidentali-Chinenses.

(Ex: Not. R. Bot. Gard. Edinburgh., XVII [April 1907], pp. 69—81, pl. XII—XIX.)

1. *Gentiana* (*Amarella*) *Trailliana* G. Forrest, l. c., p. 69, pl. XII.

Annua 2,5 dm alta glabra erecta a basi ramosa, caule quadrangulati purpurascente ramis ascendentibus unifloris vel 2—3-floris. Folia basalia ovata obtusa in vaginam attenuata, maxima 1,5 cm longa, 8 mm lata; folia superiora ovata amplexicaulia (jugis ad 8). Flores longe-pedicellati, pedunculis saepe 5 cm longis rigidis. Calyx laxus basi tantum gamosepalus, lobis 5 parum inaequalibus lanceolatis v. ovatis 8 mm longis. Corolla caerulea hypocrateriformis ad medium 5-loba, tubo 12 mm longo cylindrico intus basi glanduloso, lobis ellipticis integris obtusis, squamis 4 mm longis multifidis albidis. Stamina ad medium tubi affixa squamas attingentia. Gynaeceum 12 mm longum, ovario oblongo vix stipitato, stylo brevi lobis recurvis.

„Dry pasture land, Chung Tien plateau opposite Niu Chang pass and near Hsia Chung Tien. Flowers blue. Elevation 12—13000 feet. Yunnan, Sept. 1904.“ G. Forrest. No. 350.

A distinct species allied to Franchet's *G. cyananthiflora* which is distinguished by its perennation, its caudicles, the long petioles to its basal leaves, and its smaller flowers.

2. *Gentiana* (*Stenogyne*) *leptoclada* Balf. fil. et G. Forrest, l. c., p. 71, pl. XIV.

Annua radice tenui glaberrima e basi multicaulis, caulibus patentibus tenuibus viridibus 4-angulatis alis integris, ramis ultimis horizontaliter divaricatis. Folia rosularum sub anthesi nulla; caulinia parva late ovata

v. subcordiformia brevissime petiolata tenuia 5-nervia, 1—1,5 cm longa, 7—10 mm lata, margine tenuiter erosa subcartilaginea. Flores solitarii ad apicem ramulorum brevium inter folia suprema brevissime pedicellati. Calycis tubus membranaceus angustus obconicus 8 mm longus, angulis quinque exalatis viridibus v. nigro-rufescentibus minutissime scaberulis; lobi lineari-aristati 4 mm longi. Corolla coerulea calyce fere triplo-longior obconico-tubulosa, tubo 2 cm longo, lobis triangulari-acutis latis 7 mm longis plicas subtruncatas breviter fimbriatas superantibus. Staminum filamenta apice recurva. Ovarium angustum 10 mm longum stipitatum, stipite 5 mm longo basi aurantiaco tumido; stylus ovarium aequans corollam superans ramis brevibus recurvis. Semina complanata exalata.

„Valley of the Yangtse above Shiti Ko 7—9000 feet. Flowers bright blue. Yunnan, Oct. 1904.“ G. Forrest. No. 409.

Allied to *G. primulaeflora* Franchet, but distinguished by its larger size, larger flowers, shape of the corolla. In some flowers two of the stamens are much shorter than the others, but this does not appear to be a constant feature.

3. *Gentiana (Frigida) ornata* Wall. var. **alba** G. Forrest, l. c., p. 72.

A plant that appears to be a white variety of this species is included in the collection from

„Plateau on summit of pass between Wei Hsi and Chi Tien on the Yangtse. Yangtse-Mekong divide. Elevation 14000 feet. Flowers pierce snow, white. Yunnan, Oct. 1904.“ G. Forrest. No. 408.

4. *Gentiana (Frigida) heptaphylla* Balf. fil. et G. Forrest, l. c., p. 72, pl. XIII.

Perennis caespitosa e collo multicaulis, sub anthesi plurimis gemmibus suffulta, caulibus tomentosus decumbentibus demum erectis unifloris. Folia rosulata nulla; caulinia semper 7-verticellata in vaginam unam plus minusve membranaceam coalita; laminae verticillarum inferiorum ovatae v. obovatae 4—5 mm longae 2 mm latae vaginaque commune 2 mm longa laminis continua, superiorum subflorem congestarum lineares 12 mm longae 2 mm latae vagina 8 mm longa sinus concavis, omnes acutae margine minute albo-ciliatae. Flores sessiles. Calyx foliorum verticilli verosimilitudine 7-lobus, lobis 8 mm longis, viridibus linearibus acutis, tubo 13 mm longo 7-purpureo-vittato paullo brevioribus. Corolla magna, 4,5 cm longa late campanulato-infundibuliformis coerulescens punctata et 7 fasciis coloratis coeruleo-vittata 7-loba, lobis brevibus 5 mm longis deltoideis integris acuminatis, plicis truncato-erosis. Ovarium valide stipitatum, stylo brevissimo.

„Bare grassland on western side of summit of Kari pass, also for some distance on descent to Shu Pa Lung valley. Yangtse-Mekong divide. Elevation 15—16000 feet. Yunnan, Sept. 1904.“ G. Forrest. No. 45.

„Kari pass. Near summit between Pung-tzu-la and Shi-zo. Yangtse-Mekong divide. Dry grassland. Yunnan. Elevation 15000 feet. Sept. 1904.“ G. Forrest. No. 405.

A near ally of Franchet's *G. ternifolia* and of the *G. hexaphylla* of Maximowicz, but distinguished at once by the leaves, seven in a whorl. A beautiful plant.

5. *Gentiana* (*Chondrophylla*) *scariosa* Balf. fil. et G. Forrest, l. c., p. 74. pl. XV.

Annua glauca pumila gracilis, 5—6 cm alta, caulibus a basi ramosissimis ramis erecto-fasciculatis dense imbricato-foliatis. Folia rosulata brevia 5—7 mm longa, oblonga acuminata rigida margine hyalina; caulinia 1—5 cm longa basi connata adpresso-erecta subulata plus minusve scaberula trinervia nervo medio subtus prominulo, margine late membranaceo, apice triquetro aristulato; folia superiora calycis basim involucrentia. Flores solitarii sessiles. Calyx 2 cm longus corolla brevior, lobis erectis 8 mm longis binerviis acuminatis aristulatis tubo paullo brevioribus. Corolla tubulosa coerulea punctulata, 3 cm longa, lobis ovatis acutis apiculatis 5 mm longis margine subundulatis, plicis ovatis coeruleis erosis lobis fere aequilongis. Ovarium longe stipitatum.

„Descent from Niu Chang Pass to Chung Tien Plateau. Elevation 13—14000 feet. Open grassy places in pine-woods. Flowers bright blue, closing whenever the plant is plucked. Yunnan, Sept. 1904.“ G. Forrest. No. 404.

A near ally of *G. Rockhilli* Hemsl., but more branched, has longer leaves, is scaberulous, has a longer corolla with slightly crenate apiculate lobes, and the plicae are blue.

6. *Gentiana* (*Chondrophylla*) *taliense* Balf. fil. et G. Forrest, l. c., p. 75.

Annua 4 cm alta, a basi dense breviterque ramosa, caulibus minutissime scabriusculis. Folia basalia majora oblonga elongata ad 3,5 cm, 13 mm lata subcrassa, superiora elliptica, suprema anguste lanceolata, omnia plus minusve albo-marginata carinataque, margine minutissime scaberula, apice recurvata aristata. Flores brevissime pedicellati. Calyx tubum corollae superans, tubo membranaceo campanulato exalato 3 cm longo, lobis lanceolatis 4 cm longis carinatis margine membranaceis apice aristatis. Corolla tubulosa alba v. coerulea ad staminum insertionem aurantiaca, tubo 8 mm longo, lobis rotundato-triangularibus mucronulatis vix 2 mm longis, plicis vix lobis brevioribus subtruncatis crenulato-erosis. Stamina aequalia filamentis basi incrassatis. Ovarium complanatum 4 mm longum 2,5 mm latum cum stipite 1,5 mm longo discoque 5-gono cincto, anguste alatum, apice rotundatum ibique ala quaque in duas alas minute dentatas fissa; stylo breve ad basin usque bifido ramis revolutis. Capsula vix exserta ala apice incrassata; semina fusiformia trigona, testa obscure areolata cellulis in longum extensis.

„On grassy slopes around Tali. Abundant on interior of city walls. Flowers ranging from white to deep blue, centre orange yellow. Elevation 6500—8000 feet. Yunnan, S.-W.-China“ February 1905. No. 702.

A species of the affinity of *G. pedicellata* Wall., of which the limits are variously drawn by authors. It may be that the plant here described is a particularly xerophilous form of it, but none of the descriptions of forms of *G. pedicellata*, nor specimens quite match it.

7. **Crawfordia Trailliana** G. Forrest, l. c., p. 76, pl. XVI.

Planta scandens omino glabra 20-pedalis. Caulis volubilis quadrangularis saepe purpurascens. Folia breviter petiolata petiolo 5—8 mm longo subalato; lamina 5—7 cm longa 2—3 cm lata oblonga v. elliptica, plus minusve acuminata, basi angustata, crassa, subtus pallidior, trinervius, margine integra v. suberosa, subrevoluta subcartilaginea. Rami florales ad axillas foliorum solitarii binive rarissime terni, superpositi et acro-potentim evoluti, florem unum gerentes ad apicem pedunculi longi sub-quadrangularis volubilis basi pari foliolorum linearium minorum sterili-um vestiti, vel cymam volubilem formantes internodiis elongatis vestitamque 3—4 paribus foliorum linearium plus minusve fertili-um. Flores magni pentameri pedunculis elongatis. Calyx tubulosus purpurascens, tubo 2 cm longo per anthesin dimidiato-spathaceo 5-carinato brevissime coronato, corona integra lobis 2 mm longis deltoideis acutis recurvis subcrassis trinerviis. Corolla 7 cm longa colore heliotropii supra late campanulata infra tubulosa tubo ex ore calycis triente protracto intusque per totum staminum filamentis bialatis alligatis munito; lobis 15—16 mm longis, 12 mm latis triangulari-ovatis acutis, margine subcrenulato, trinerviis, plicis brevibus crenulatis. Staminum filamenta 2 mm lata ex fauce libera complanata nerve medio conspicuo; antheris versatilibus. Discus 5-glandulosus. Ovarium stipite subnullo; stylus infra ramos 12 mm longos 2,5 cm longus.

„Climber of 6—20 feet. Flowers rich deep heliotrope. Damp shady situation on tall grass and scrub. Side valleys of the Salwen, Salwen-Irrawaddi divide, from Shah-Pai-Lei-Ti north to Me-Ko-Ti. Lat. 26° 10' to nearly 27° N. Alt. 5—7000 feet. Forms a distinct belt never above nor below those heights. N.-W. Yunnan, Nov. 1905.“ G. Forrest. No. 963.

A beautiful species showing markedly the twining character in the flower-stalks as well as in the vegetative stem. Accessory flower-shoots are developed regularly and acropetally in the axils of the leaves. The first axillary shoot developed forms commonly an elongated cyme, ending in a flower and bearing three or four pair of leaves below, all or some only of which give rise to flowers. The accessory shoot may do likewise or form only a single terminal flower the peduncle of which shows only a pair, occasionally two pairs, of small leaflets at its base. Towards the termination of the vegetative twigs the elongated cymes may not develop and the accessory buds may remain arrested. The length of the flower peduncle varies, a terminal flower of a cyme may have one several inches long. The ovary has hardly any stipe, and as it enlarges it causes rupture of the calyx dimidiately along one side in the same fashion as Franchet describes it in *C. Delavayi*. From that species *C. Trailliana* is at once distinguished by its large flowers.

8. **Crawfordia Bulleyana** G. Forrest, l. c., p. 77, pl. XVII.

Planta scandens 10—20 pedalis. Caulis volubilis quadrangularis angulis saepe purpurascens. Folia petiolata, petiolo tenui 2 cm longo; lamina 6—7 cm longa, 3,5—4 cm lata, cordiformis v. late ovata, basi late

cuneata v. subtruncata, apice subacuminata, 5—7 nervia subtus pallidior margine vix cartilaginea et suberosa. Rami florales volubiles ad axillas foliorum bini superpositi, ramo axillari inferiore unifloro, superiore laxo cymoso bracteis foliis conformibus. Flores magni pentameri pedunculis volubilibus. Calyx infra tubulosus, tubo non fisso 17 mm longo submembranaceo 5-alato brevissime coronato corona integra purpurascens, supra cupulato-explanatus foliaceus cupulo 8 mm longo lobisque 4 mm longis ovatis erectis acutis uninerviis reticulatis margine suberosis. Corolla coerulesco-purpurea striis magis intense coloratis notata 6 cm longa supra late campanulata infra obconico-tubulosa, tubo ex ore calycis breviter extenso intus staminum filamentis bialatis alligatis munito; lobis 8 mm longis triangulari-deltaoideis acutis margine integris, plicis rotundatis crenulatis brevibus. Staminum filamenta 5 mm lata complanata inclusa. Discus 5-glandulosus. Ovarium longe stipitatum; stylus infra ramos brevis 5 mm longus, ramis 4 mm longis. Capsula exserta fusiformia complanata marginata 3 cm longa, stipite longiore; semina discoidea late alata 2 mm diam.

„Climber of 10—20 feet. Flowers bluish purple, markings a deeper shade. In bamboo brakes and on scrub at an elevation of 8—11000 feet. Ming-Kwong-Irrawaddi divide. Lat. 26° N. Upper Burmah, Oct. 1905. Also on Irrawaddi-Salwen divide above Pien-Ma.“ G. Forrest. No. 839.

Quite as showy as *C. Trailliana*, from which it is easily distinguished by its cordiform leaves on longer petioles, its smaller flowers with calyx never splitting and bearing foliaceous erect sepal lobes, its capsule with very long stipe and short style.

9. **Pleurogyne Forresti** Balf. fil., l. c., p. 78, pl. XVIII.

Annua radice tenui, ad 2,5 dm alta, omnino glabra, erecta, gracilis, caule obscure quadrangulati a basi vel e medio ramoso. Folia basalia sub anthesi nulla, caulinea elliptica v. sublanceolata v. linearia, vix petiolata, obtusa, subcrassa, margine subcartilaginea. Rami omnes floriferi adscendentes multiflori inflorescentiam copiosam formantes. Flores coerulei, 5-meri; pedicelli floribus longiores. Calyx ad basin usque partitus, segmentis linearibus 7 mm longis. Corolla fere ad basin soluta segmentis ellipticis subacuminatis 12 mm longis; foveolae duae prope basin cujusque segmenti inconspicuae; squamulae irregulariter laciniatae 3 mm longae. Stamina ad basin corollae affixa, aequalia. Capsula oblonga v. subfusiformis 8 mm longa cum stipite 1,5 mm longo.

„Summit of pass between Yangtse and Wei Hsi, Yangtse-Mekong divide. Also other places. Elevation 9—11000 feet. Flowers blue. Yunnan, Oct. 1904.“ G. Forrest. No. 25.

„Dry open hillside, edge of pine-woods, Lang Kung and other valleys. Alt., 7—9000 feet. Yunnan, 1904.“ G. Forrest. No. 211.

10. **Swertia (*Euswertia*) mekongensis** Balf. fil. et G. Forrest, l. c., p. 80, pl. XIX.

Perennis sicco nigrescente rhizomate lignoso, caulibus turionum terminalium 2—3 dm alt. glabris crassis quadrangulatis infra kata-

phylla 2—3 gerentibus dein nudis supra foliaceis. Folia kataphyllaria amplexicaulia suprema in laminam ellipticam producta; caulinia opposita sessilia ovato-cordiformia acuta plurinervia maxima 5,5—7 cm longa, 4 cm lata, integra. Inflorescentiae in cymas paniculatas breves aggregatae in axillis foliorum superiorum omnium. Flores parvi hermaphroditi tetrameri. Calyx parvus basin corollae adhaerens, tubo 1 mm longo, lobis triangularibus 2 mm longis. Corolla rotata, tubo 4 mm longo, lobis ellipticis violaceo-striatis apice rotundatis minutissime crenulatis 5 mm longis 4 mm latis quoque macula biloba basali in faucem projecta instructo. Stamina corollae lobis breviora et in faucem inserta. Gynaecium breve 4 mm longum; stylo ad basin usque fisso lobis 2 mm longis.

„Mekong-Salwen divide behind Tzekou Mission. Tibet, 1904.“ G. Forrest. No. 230.

A species named *S. congestiflora* by Franchet in the Paris Herbarium seems near this, but I have found no description of it.

XLIV. Species novae ex: Bulletin de l'Association Pyrénéenne pour l'échange des plantes. III.

(XVI [1905/06], 1906, Quimper.)

26. (351.) *Viola sudetica* Willd. var. **stenophylla** H. Sudre, l. c., p. 8.
V. gracilis de Martr.-Don. ! Flor. Tarn, p. 87, non Sibth. et Sm. —
V. gracillima (Chatenier) R. et F. Fl. Fr., III, p. 54, ex pte.

Tiges grêles, couchées à base, puis dressées, de 2—4 dcm; feuilles espacées, les moyennes et les supérieures lancéolées; pédoncules très longs; sépales plus longs et plus étroits que dans le type; éperon long et grêle; pétales plus étroits; capsule plus anguleuse, plus aiguë au sommet.

Tarn: Montagne-Noire, à Nou (Martrin-Donos); col de la Bassine, près de Lacaune (Sudre).

27. (352.) *S. ciliata* Fries (*S. patula* Jord.) var. **neglecta** A. Reynier, l. c., p. 10.

Var. *ambigua* (*S. patula* var. *glabra* Lloyd, 5^e édit. de la Flore de l'Ouest).

Marseille. (A. Reynier.)

28. (360.) *Helichrysum Stoechas* L. var. **pendulinum** Conill, l. c., p. 16.

Variation tenant de la variation *procumbens* GG. (*H. brachycladum* Jord. et Fourr.) et de la variation *syncladum* Jord. et Fourr. Comme dans l'*H. brachycladum*, les feuilles sont linéaires, vertes en dessus, les tiges rampantes, les calathides à petit corymbe compact. Comme l'*H. syncladum* elle a les feuilles courtes, réfléchies, appliquées et très nombreuses surtout à la base, les rameaux un peu ascendants et souvent tortillés et enchevêtrés. Son caractère particulier est que les tiges sont plus ou moins serrées les unes contre les autres et pendent vers le sol, perpendiculairement à la racine qui est profondément enfoncée dans les rochers. Habitat. Rochers maritimes du littoral à Argelès-sur-mer (Pyrénées-Orientales). — Juin. (L. Conill.)