

tinue, longitudinally, some to the suture, others over the volutions of the spire; spire conical, subobtuse,  $\frac{1}{3}$ rd the length of the shell, volutions 5-6, rather round; aperture broadish anteriorly, angulated posteriorly; within, of a very pale-red colour; columella rather straight, four rather distant plaits, the two anterior oblique and the more prominent; lip thick, slightly curved, denticulated within; margin broad and rather thick, extending over the anterior portion of the columellar extremity. The columella, anterior part of the dorsum, the plaits, margin and lip, all of the same whitish colour.

Long  $\frac{20}{100}$ , wide  $\frac{10}{100}$  of an inch.

*Hab.* —? Brought by Belcher. Cab. Gaskoin, unique.

### XXXIII.—*Remarks upon British Plants.*

By CHARLES C. BABINGTON, M.A., F.R.S., F.L.S. &c.\*

[Continued from p. 273.]

#### 3. *HYPERICUM ANDROSÆMUM.*

IN the recently received Fasciculus (vol. viii. fasc. 3) of Bertoloni's valuable 'Flora Italica,' it is stated that the *Hypericum Androsæmum* of Smith and other British botanists is not the plant so called by Linnæus. Bertoloni does not say that he has received the *H. anglicum* (Bert.) from Britain, but probably we ought to believe him to have done so. An examination of the materials within my reach has led me to a different conclusion from that arrived at by Bertoloni. I find that all the British specimens called *H. Androsæmum* that I possess belong to the true plant of Linnæus. I also believe that Bertoloni has rather too hastily quoted Curtis (Fl. Lond. i. t. 164) as giving a figure of his *H. anglicum*, for that plate well represents *H. Androsæmum*. Sowerby's plate (Eng. Bot. t. 1225) does indeed appear to be derived from some other species. Unfortunately Smith does not tell us, in his text to that plate, from whence the specimen there figured was obtained; but refers especially to Norfolk (N. Walsham, Wood Dalling, Costesy) for localities for his *H. Androsæmum*; stating that in that county it is most frequent.

Bertoloni also quotes the *Androsæmum grandifolium* of Reichenbach (Icon. Fl. Germ. vi. 70. t. 352) as belonging to *H. anglicum*. That figure is very incomplete, and seems not to represent the winged pedicels or acute leaves of *H. anglicum*, but may perhaps be intended for it. Reichenbach states that his plant

\* Read before the Botanical Society of Edinburgh, March 10, 1853.



came from Switzerland, and adds, "Etiam planta anglica 'Isle of Arran, Buteshire,' huc pertinet." The *H. grandifolium* (Chois.) is an Azorean plant which I possess from Madeira.

Under these circumstances it becomes desirable to ascertain what plant is called *H. Androsæmum* in different parts of Britain: my specimens, correctly so named, are from Caernarvon, Tenby, Dunstafnage in Argyleshire, and Burrishoole in the county of Mayo. Dr. Balfour possesses it from Isles of Arran and Bute in Scotland.

In the month of August 1852, Dr. Balfour gathered at Glanmire near Cork, a large plant which is manifestly distinct from *H. Androsæmum*, and probably may be the *H. anglicum*. It is far more nearly allied to *H. hircinum* than to *H. Androsæmum*, from which latter species its winged pedicels, much larger flowers, much narrower and more pointed sepals which do not enlarge with the ripening capsule, relatively much longer petals, which are more than double the length of the calyx, styles equalling the stamens, or even exceeding them, and pointed oblong capsules, clearly distinguish it.

From *H. hircinum* it is separated by its flower-buds being considerably broader in proportion to their length, the petals clawed rather than narrowed to their base, the leaves broadly cordate-ovate-acuminate and pellucidly veined but only slightly pellucidly punctured. In *H. hircinum* they are (even when slightly cordate at the base, as is sometimes the case) almost exactly ovate-oblong and much both pellucidly punctured and veined. These differences are slight, and it is therefore quite possible that the plant found in Ireland may prove to be a state of *H. hircinum*. The habit of the plants is (I believe) so different that I am rather inclined to look upon them as distinct.

*H. grandifolium* (Chois.) has terete branches and peduncles, blunt leaves which are very much pellucidly punctured, narrow petals, and an ovate-conical capsule, *i. e.* apparently only slightly narrowed at its base. As Bertoloni justly remarks, the figure given by Choisy (Prod. d'une Monog. de la Famille des Hypericinées, t. 3) clearly shows that it is not the same as our plant, and this is confirmed by my specimen from Madeira.

Bertoloni appears to consider his *H. anglicum* as very much more closely allied to *H. Androsæmum* than is the case with the Irish plant, to which I provisionally apply the name of *H. anglicum*, and it is thus possible that he may have had something else in view when he conferred that name upon the plant before him; nevertheless his quotation of Reichenbach's plate is in favour of his plant being the same as ours.

*H. Androsæmum* and *H. anglicum* may perhaps be characterized as follows:—



1. *H. Androsæmum* (Linn.); stem shrubby compressed, leaves broadly subcordate-ovate blunt, cymes few-flowered, sepals broad unequal, *styles falling much short of the stamens, capsules pulpy blunt.*

*H. Androsæmum*, Linn. *Sp. Pl.* 1102, et *Auct.*

This plant is usually only slightly branched in its upper part. There is but little trace of a wing upon its stem or even upon its pedicels. The sepals and petals are of about equal length, and the former are afterwards much enlarged, so as greatly to exceed the very blunt globose capsule.

2. *H. anglicum* (Bert. ?); stem shrubby 2-edged much branched, pedicels 2-winged, *leaves broadly cordate-ovate-acuminate*, cymes few-flowered, sepals ovate-lanceolate unequal, *styles equalling or exceeding the stamens, capsules oblong acute.*

*H. anglicum*, Bert. *Fl. Ital.* viii. 310 ?

*H. Androsæmum*, Eng. *Bot.* t. 1225.

Stem terete with two slight wings, erect, much and repeatedly branched, 3-4 feet high, reddish; branches opposite, terete below, 2-winged above. Leaves alternately opposite, large, sessile, broadly cordate-ovate-acuminate, acute, entire, with many fine pellucid net-veins, in the centre of each mesh of which near to the edge of the leaf there is a pellucid puncture, these punctures becoming more and more rare as the midrib is approached, green on both sides; ribs prominent and reddish beneath. Cymes terminating the stem and branches, small, once or twice triradiate, having sometimes below them one or two simple axillary solitary peduncles. Peduncles and pedicels 2-winged, jointed at some distance below the flower, thickened above the joining, at which there are two small deciduous bracts. Sepals unequal, ovate-lanceolate, acute, reflexed, not enlarged on the fruit, deciduous (?), with a few pellucid punctures, the larger ones 3 lines long and 1 line broad. Petals yellow, reddish externally, about three times the length of the sepals (I cannot satisfactorily determine the exact proportion in the dry specimens before me), broad, rounded at the end, shortly clawed, many-veined. Filaments exceeding the corolla. Styles about equalling the stamens. Capsules oblong, narrowed at both ends, with a long point formed of the persistent base of the styles. Mature capsules I have not seen.

Flowering in August. "In great quantity, apparently wild, on the banks of the Glanmire river near Cork." Dr. Balfour.

My friend Mr. J. Ball gave to me an imperfect specimen of an *Hypericum* gathered by him in the county of Dublin in 1837, which may prove to be *H. anglicum*, for it more resembles that



plant than either of the allied species. I have a slight suspicion that Mr. Ball's plant did not grow in such a spot as to be satisfactorily considered as indigenous. Dr. Balfour informs me that he gathered the plant called *H. anglicum* in this paper at Culross in Scotland in July 1833, also that he has a specimen from the county of Galway "very like it."

It may be well to add the specific character of *H. hircinum* as follows :—

*H. hircinum* (Linn.); stem shrubby 2-edged much branched, pedicels 2-winged, leaves ovate-oblong, cymes few-flowered, sepals lanceolate unequal, styles equalling or exceeding the stamens, capsules oblong acute.

*H. hircinum*, Linn. *Sp. Pl.* 1103 et *Auct.*

#### 4. AGRIMONIA ODORATA.

Until recently the only authority for the introduction of *Agri- monia odorata* into British botany was a single specimen gathered in 1842 in the island of Jersey by the Rev. W. W. Newbould. On the 9th of September 1852 I had the pleasure, in company with that gentleman, of finding it growing rather abundantly amongst bushes on the rocky shore of Lough Neagh in the county of Antrim, and within a few hundred yards of Shane's Castle. There it was intermixed with *A. Eupatoria*, and they conspicuously differed. They were out of flower at that season.

I learn from a letter addressed by Mr. Borrer to Mr. Newbould that Mr. Joseph Woods found *A. odorata* in the autumn of 1852 near to the Start Point in Devonshire, and near Gwihian in Cornwall.

*A. odorata* may be characterized as follows :—

*A. odorata* (Mill.); leaves interruptedly pinnate coarsely serrate hairy and with many minute glands beneath, calyx-tube of the fruit bellshaped not furrowed, exterior spines of the fruit declining.

*A. odorata*, Mill. *Dict.* n. 3; Koch, *Syn.* 245; Mert. et Koch, *Deutschl. Fl.* iii. 376; DeCand. *Prod.* ii. 587?; C. A. Mey. "Bull. St. Pet. x. 344," and *Ann. Sc. Nat.* ser. 2. xviii. 375; Guss. *Syn.* i. 527; Ledeb. *Fl. Ross.* ii. 31.

*A. procera*, Wallr. in *Linnæa*, xiv. 573.

This plant closely resembles *A. Eupatoria* in most of its characters, but is manifestly distinct when the fruit is observed. The bellshaped form of that part in the present species is very different from the obconic fruit of its ally. In this the outer rows of the spines of the calyx are directed downwards, and the inner rows exceed the limb of the calyx; the whole plant also is considerably larger than *A. Eupatoria*, which has its outer



spines patent, but not having a downward tendency (although sometimes the act of pressing them for the herbarium pushes them in that direction), and its inner ones scarcely equal the limb of the corolla in length. The fruit of *A. Eupatoria* is deeply furrowed almost to its base, and becomes more manifestly so as it ripens; that of *A. odorata*, which has short shallow furrows on its upper half when young, usually altogether loses them as it advances to maturity. MM. Cosson and Germain (Fl. de Paris, 182) attempt to account for the difference of form, &c. of the fruit by attributing the presence of two achenes to the *A. odorata*, and of only one to *A. Eupatoria*. Undoubtedly such is generally the case, but I have found that the latter is often furnished with two achenes, and yet its fruit retains the usual form and sculpture.

*A. odorata* is usually larger in all its parts than its ally; its leaves are much more thickly covered with hairs, and have very many minute glands on their under side. These glands are the organs from which the rather agreeable scent proceeds which has caused the specific name.

The description of *A. odorata* in DeCandolle's 'Prodromus' (ii. 587) contains the words "foveolis obovatis usque ad basin productis, setis adscendentibus brevibus." In neither of these respects does it agree with the plant of more recent authors, except G. Don (Syst. of Gard. and Bot. ii. 563), who has translated that definition.

##### 5. *MATRICARIA MARITIMA*.

Much doubt has long attended the *Matricaria maritima*; and numerous attempts have been made to discover distinctive characters between it and *M. inodora*; but experience has uniformly shown that those pointed out were too inconstant to be of any value. Nevertheless most authors have retained them as species, and although, as will be seen below, I am persuaded that many of the plants called *M. maritima* are referable to a maritime state of *M. inodora*, still I am not as yet prepared to give up the original Dillenian species upon which the Linnæan plant is founded, but do not pretend to have succeeded any better than others in providing a specific character for it.

The *M. maritima* appears under that name in 'Linn. Sp. Pl.' (ed. 1. p. 891), where the *Chamamelum maritimum perenne humiliss, foliis brevibus crassis, obscure virentibus* of Dillenius (Raii Syn. ed. 3. 186. t. vii. f. 1) is quoted as its source. In that place Dillenius has given a description of it, to which, as the Synopsis is a common book, this reference will be sufficient. Linnæus also quotes his own 'Iter Westgothicum' (p. 148), where he had described the plant. That work is not of easy access, but a copy



of this description will be found in Richter's useful 'Codex Botan. Linnæanus' (n. 6437). Linnæus there expresses his belief that if its radiant florets had not been toothed, it would have agreed with the plant of Ray's 'Synopsis,' and as that is now decided to be a character of very little value, we may consider his opinion as favourable to the identity of the plants. It is remarkable, that in the 'Sp. Pl.' ed. 3. he has *Chrysanthemum inodorum* (the *M. inodora* of Fl. Suec. ed. 2), and places under it "*β. Chamæmelum maritimum*, It. w. goth. 148," but also describes *M. maritima* as the plant of Ray's 'Synopsis,' and again makes the same reference to the 'Iter west-gothicum.' As these references necessarily belong to the same plant, it is manifest that an error has occurred which has naturally caused much of the doubt expressed by succeeding botanists; those who only knew the maritime form of *M. inodora* thinking that the reference was correctly placed under *C. inodorum*, and consequently *M. maritima* was an accidental repetition. As very few botanists appear to have been acquainted with the Dillenian plant, or that found at Billingen in Sweden by Linnæus, it has happened that the true *M. maritima* has nearly disappeared from books. Even those modern authors who separate the *M. maritima* from the *M. inodora* have usually described the maritime form of the latter under the former name. To Fries the credit is due of first, in modern times, directing attention to this fact, and making us acquainted with the true *M. maritima*. His valuable remarks upon the plants will be found in his 'Mantissa tertia' (pp. 115-117) and 'Summa Veg. Scand.' (p. 186). In the latter work he observes, that M. Gay of Paris thinks that two species are included under the name of *M. maritima* in Sweden. If, as is most probable, the two plants are the *M. inodora β. salina* and the true *M. maritima*, there seems no difficulty in acceding to M. Gay's views, although not allowing that the former of these plants is separable specifically from *M. inodora*. It is proper to remark, that Wallroth appears to have known that the *Matricaria* of saline districts was not necessarily the maritime plant of Dillenius, for in his 'Schedulæ Criticæ' (p. 485) he points out differences between his *Pyrethrum inodorum β. salinum* and the *P. maritimum* of Smith.

The following are as good specific characters as I have succeeded in drawing up for the plants. Taken as a whole I think that they may be so distinguished, but it is to be feared that no one part alone can be implicitly depended upon:—

1. *M. inodora* (Linn.); st. erect, leaves sessile pinnate, leaflets with many usually alternate capillary pointed segments, basal leaflets crowded clasping the stem not separated from the others, heads



solitary, phyllaries lanceolate blunt with a fuscous scarious torn margin, fruit with two glandular spots just below the elevated border.

*M. inodora*, *Linn. Fl. Suec.* ed. 2. 297; *DeCand. Prod.* vi. 52; *Fries, Mant.* iii. 115; *Hook. and Arn. Brit. Fl.* 242; *Gren. et Godr. Fl. Fr.* ii. 149; *Lloyd. Fl. Loir.-inf.* 139.

*Chrysanthemum inodorum*, *Linn. Sp. Pl.* ed. 3. 1253; *Koch, Syn.* ed. 2. 419.

*Pyrethrum inodorum*, *Sm. Fl. Brit.* ii. 900, and *Eng. Fl.* iii. 452; *Eng. Bot.* t. 676.

*Tripleurospermum inodorum*, *C.H. Schultz ex Koch Syn.* ed. 2. 1026; *Walp. Rep.* vi. 196.

*Chamæmelum inodorum annuum humilius*, foliis obscure virentibus, *Dill. in Raii Syn.* ed. 3. 186.

Stem smooth, angular, 12 to 18 inches high; the branches spreading. Rachis of the leaf enlarged at the base and furnished with many closely-placed leaflets which clasp the stem, and, as Wallroth justly remarks, resemble a comb; the next leaflets generally small and short, simple or simply forked; succeeding leaflets becoming gradually longer and more compound; all placed on the rachis at pretty regular intervals, except the closely-placed *basal ones, which are not separated from the lowest of the others by any markedly greater interval than those others are from each other*. Involucre flat. Phyllaries with the scarious border broadly fuscous. Radiant florets linear-oblong, blunt, 3-toothed at the end, white. Disk yellow. Receptacle (when the florets are all expanded) often twice as long as broad. Fruit with three prominent smooth ribs; having two internal and narrow, and one external and broad, rough spaces between the ribs; the glandular spots round.

*β. salina*; stem more diffuse often nearly prostrate, leaflets short fleshy, involucre umbilicate, disk broader, fruit with only the one external rough space and oblong glandular spots.

*M. maritima*, *Linn. Herb.!*; *Gren. et Godr. Fl. Fr.* ii. 149 (exc. *Syn.*).

*Pyrethrum inodorum β. salinum*, *Wallr. Sched. Crit.* 485.

*Pyrethrum maritimum*, *Sm. Fl. Br.* ii. 901, and *Eng. Fl.* iii. 452; *Eng. Bot.* t. 979; *Wilson in Hook. Journ. of Bot.* i. 271.

*Tripleurospermum maritimum*, *Koch, Syn.* ed. 2. 1026?

This plant is often very spreading and very fleshy. Its central upright or ascending stem does not bear nearly so large a proportion to the spreading and usually prostrate branches as is the case in typical *M. inodora*. In that the branches are usually very short absolutely, or at all events relatively to the upright central stem, and usually, if not always, ascend; in the variety



*salina* the branches are frequently so much developed as to greatly exceed in length the primary stem, which is thereby weighed down and rendered distinguishable by careful observation alone. From inhabiting the sea-shore it has usually been called *P. maritimum*, but seems to differ materially from the plant of Dillenius to which that name was intended to apply. The receptacle is scarcely twice as long as broad, but is not constant in shape. Segments of the leaves furrowed beneath and opposite or alternate. Rachis of the leaves with a broad furrow enclosing a keel beneath.

Smith's *P. maritimum* is placed under this variety on account of his description and the figure in 'English Botany' agreeing far better with it than with the *M. maritima*. He intended to include the Dillenian plant, but appears to have been scarcely, if at all, acquainted with it. In Hooker's 'Journal of Botany' (*l. c.*) the accurate Mr. W. Wilson remarks, "Stem certainly not hollow. Segments of the leaves not wholly destitute of points. Seeds [fruits] of the ligulate florets with a deeply 4-lobed cup-shaped crown, below which, externally, are two yellow oblong bodies extending halfway down the seed, which is not in that part furrowed, though it is deeply so on the other side. Segments of the tubular florets keeled at the back, the line very prominent just below the apex of the segment. I consider it a mere variety commonly found on the sea-shore." An authentic specimen from him is the *M. inodora*  $\beta$ . *salina*.

*M. inodora* grows on cultivated land and waste ground.  $\beta$ . is found by the sea.

2. *M. maritima* (Linn.) ; stem diffuse, leaves pinnate, leaflets and segments opposite fleshy linear bluntish short, basal leaflets few small separated from the others, heads solitary, phyllaries oblong blunt with a scarious (pale) entire margin, fruit with two elongated glandular spots just below the elevated lobed border.

*M. maritima*, Linn. *Sp. Pl.* ed. 1. 891, ed. 3. 1256 ; *Fries, Mant.* iii. 115, et *Summa*, 186, et *Herb. Normale*, xii. 2 !

*Chamæmelum maritimum* perenne humilius, foliis brevibus crassis, obscure virentibus, *Dill. in Raii Syn.* ed. 3. 186. t. 7. f. 1 ; *Linn. Iter. w. goth.* 148.

Stems much more branched near to the base, often prostrate, much shorter than those of *M. inodora*. Rachis of the leaves only slightly enlarged at the base, and furnished there with very few and short leaflets ; these are followed by a long naked space, after which the rest of the leaflets are placed at pretty regular intervals and are nearly equal in size. The involucre appears to be flat. Phyllaries with their scarious border pale or narrowly fringed with pale purple. Radiant florets oblong, shorter in



proportion than those of *M. inodora*, notwithstanding the heads being usually smaller, rounded and entire, or faintly 3-crenate at the end, white. Disk yellow. Receptacle hemispherical. Fruit with three prominent smooth ribs; an intermediate rough space externally, but no internal spaces (the whole internal surface being occupied by the smooth ribs); less compressed at the border, and more square than that of *M. inodora*.

I had the pleasure of having this plant shown to me by my friend Mr. Borrer growing at the place, Cockbush near West Wittering, on the coast of Sussex, where Dillenius found it; and am indebted to him for pointing out to me the probability of its being distinct from the *Pyrethrum maritimum* of Smith. I am also much indebted to the celebrated Fries for a specimen of the authentic *M. maritima* of Linnæus. These two plants agree very well, although it may be doubted if the Swedish plant is not more upright than that of England. Fries lays much stress upon the "ligulis nervoso-striatulis" of his *M. maritima*, a character which is well shown in his specimens. I do not find that the *M. maritima* of Sussex is so characterized. I possess a specimen, gathered in the island of Lewis, one of the Hebrides, which has its rays marked in that manner, but it is certainly not the *M. maritima* of Fries, and does not appear to be distinguishable from *M. inodora*  $\beta$ . *salina*, with which it agrees in having large flowers with long rays, umbilicate involucre, fuscous-edged (but usually entire) phyllaries, and similar leaves.

I have not seen any specimens of the true *M. maritima* from any British locality except West Wittering.

I may be allowed to express a hope that these remarks will direct the attention of botanists to the maritime *Matricaria*, and thereby determine the points that remain doubtful, the value of their claims to distinction, and also their true distribution in Britain.

[To be continued.]

#### XXXIV.—On the Genera of the Tribe Duboisieæ.

By JOHN MIERS, Esq., F.R.S., F.L.S.

##### ANTHOCERCIS.

THIS genus of Labillardière was first arranged together with *Duboisia* in a separate division of *Solanaceæ* by Mr. Brown (Prodr. 448). Mr. Bentham, first in Lindley's 'Introd.' p. 292, and subsequently in the 'Prodromus' of DeCandolle, x. 191, placed it among *Scrophulariaceæ*, in his tribe *Salpiglossideæ*. About four years ago (*huj. op.* iii. 170), I offered several remarks,





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