

The Student's Flora of the British Isles.

CLASS I. DICOTYLEDONES.

SUB-CLASS I. ANGIOSPERMÆ.

ORDER I. RANUNCULACEÆ.

HERBS rarely shrubs. *Leaves* radical or alternate, opposite in *Clematis*; stipules 0, or adnate to the petiole. *Flowers* regular or irregular, 1-2-sexual. *Sepals* 5 or more, rarely 2-4, deciduous, often petaloid, usually imbricate in bud. *Petals* 0, or 5 or more, rarely 3, imbricate in bud, often minute or deformed. *Stamens* many, hypogynous; anthers basifixed, dehiscence subdorsal. *Disk* 0. *Carpels* many, rarely 1, usually free, 1-celled; stigma simple; ovules 1 or more on the ventral suture, anatropous, erect with a ventral or pendulous with a dorsal raphe. *Fruit* of 1-seeded achenes, or many-seeded follicles. *Seed* small, albumen copious; embryo minute.—DISTRIB. Abundant in temp. and cold regions; genera 30; species 503.—AFFINITIES. With *Berberidæ* and *Papaveraceæ*; analogies with *Alismaceæ* and *Rosaceæ*.—PROPERTIES. Usually acrid.—EXCEPTIONAL FORMS (British). Stem woody in *Clematis*; flowers polygamous in *Thalictrum*; sepals persistent, carpels connate in *Helleborus*; stamens few in *Myosurus*; follicle sometimes solitary in *Delphinium*; berry solitary, and stigma dilated in *Actæa*.

TRIBE I. **CLEMATIDÆÆ.** *Sepals* valvate. Shrubs with opposite leaves.

1. *Clematis*

TRIBE II. **ANEMONEÆÆ.** *Sepals* imbricate. *Achenes* with 1 pendulous seed.

Involucre 0. *Sepals* 4-5, petaloid. *Petals* 0.....2. *Thalictrum*.

Involucre of 3 leaves. *Sepals* 4-20, petaloid. *Petals* 0.....3. *Anemone*.

Involucre 0. *Sepals* 5-8, petaloid. *Petals* 5-16, conspicuous.....3* *Adonis*.

Involucre 0. *Sepals* 5, spurred. *Petals* small, tubular.....4. *Myosurus*.

TRIBE III. **RANUNCULEÆÆ.** *Sepals* imbricate. *Achenes* with 1 ascending seed.....5. *Ranunculus*.

TRIBE IV. **HELLEBOREÆÆ.** *Sepals* imbricate. *Follicles* many-seeded, except in *Actæa*.

B

- * *Flowers regular. Follicles many-seeded.*
 Sepals petaloid. Petals 0.....6. *Caltha*.
 Sepals petaloid, deciduous. Petals small, entire.....7. *Trollius*.
 Sepals herbaceous, persistent. Petals small, 2-lipped.....8. *Helleborus*.
 Sepals petaloid, deciduous. Petals small, 2-lipped.....8*. *Eranthis*.
 Sepals 5-6, petaloid. Petals large, spurred.....9. *Aquilegia*.
 ** *Flowers irregular. Follicles many-seeded.*
 Sepals many, the dorsal spurred.....9*. *Delphinium*.
 Sepals many, the dorsal arched and hooded.....10. *Aconitum*.
 *** *Flowers nearly regular. Fruit a berry*.....11. *Actæa*.

1. CLEMATIS, *L.* TRAVELLER'S JOY.

Usually climbing under-shrubs. *Leaves* opposite, usually compound, exstipulate; petiole often twining. *Inflorescence* axillary or terminal; flowers proterandrous, honeyless. *Sepals* usually 4, petaloid, imbricate or valvate. *Petals* 0. *Stamens* many. *Carpels* many; ovule 1, pendulous. *Fruit* a head of sessile or stalked achenes, with long bearded styles.—**DISTRIB.** All temp. climates, rarer in the tropics; species 100.—**ETYM.** *κλημαρίς*, the Greek name for this or a plant of similar habit.

C. Vital'ba, *L.*; leaflets 3-5 remote. *Old Man's Beard*.

Hedges and thickets, from Stafford and Denbigh southd.; most common on chalky soil; not a native of Scotland or (?) Ireland; fl. July-Aug.—A climbing under-shrub. *Leaflets* 2-3 in., ovate-cordate, entire toothed or lobed; petiole persistent when twining. *Flowers* 1 in. diam., odorous, greenish-white. *Sepals* 4, pubescent. *Achenes* hairy; awns 1 in., feathery.—**DISTRIB.** Europe, from Holland southd., N. Africa, W. Asia.

2. THALICTRUM, *L.* MEADOW-RUE.

Erect perennial herbs. *Leaves* compound, stipulate. *Flowers* panicled or racemed, often polygamous, honeyless, proterogynous, anemophilous. *Sepals* 4-5, petaloid, imbricate in bud. *Petals* 0. *Stamens* many. *Carpels* few or many; ovule 1, pendulous. *Fruit* a small head of sessile or stalked achenes; style persistent or deciduous.—**DISTRIB.** Temp. and colder regions of the N. hemisphere; species 50.—**ETYM.** Probably the *Thalictrum* of Pliny.

1. **T. alp'num, *L.***; raceme simple, flowers few drooping, anthers linear apiculate.

Alpine and sub-alpine bogs from Shetland to York and Carnarvon; rare in Ireland; ascends to 4,000 ft.; fl. July-Aug.—*Stem* 4-10 in., wiry, simple, often stoloniferous. *Leaves* 2-ternate; leaflets $\frac{1}{2}$ to $\frac{3}{4}$ in., suborbicular, glaucous beneath, obtusely lobulate. *Raceme* drooping, then erect; pedicels recurved in fruit. *Sepals* 4, purplish. *Stamens* 8-20, pendulous. *Achenes* 2-3, stipitate, curved, ribbed.—**DISTRIB.** N. and Arctic Europe, N. and W. Asia to Himalaya, N. America.

2. **T. mi'nus, *L.***; stem more or less striate, panicle lax, flowers drooping, anthers apiculate, fruit erect.

Dry places from Orkney southd. ; ascends to 1,800 ft. in the Lake District ; Ireland ; fl. July-Aug.—*Stem* $\frac{1}{2}$ –4 ft., stout, rigid, often zigzag, striate throughout or towards the nodes only, usually furrowed when dry. *Leaves* triangular, 3–4-pinnate ; leaflets variable, $\frac{1}{4}$ –1 in., acutely or obtusely lobed, sometimes stipellate ; stipules adnate to the petiole, auricles spreading or reflexed. *Sepals* 4, yellow-green. *Achenes* 3–5, sessile, elliptic-oblong, straight or gibbous, 8–10-ribbed.—*DISTRIB.* Europe (Arctic), N. Africa, N. and W. Asia to the Himalaya, Greenland.

T. minus proper ; often glaucous and glandular ; stem 6–18 in., usually naked at the base.—*VAR. dunense*, Dumort. (maritimum, *Ed.* 2) ; branches of broad panicle spreading. Sandy coasts, Orkney to Norfolk and S. Wales.—*VAR. T. montanum*, Wallr. (calcareum, *Jord.*) ; branches of deltoid panicle erecto-patent. Dry hills, Argyll to Somerset.—The Cambridge var. *saxatile*, Bab. of *ma'jus* seems rather referable here.

Sub-sp. *MA'JUS*, Sm. (not *Jacq.*) ; stem 2–4 ft., more leafy below, leaflets usually much larger. From Perth southd. ; most common in the north, in copses, &c. ; Ireland. The vars. *T. Ko'chii*, Fries, with spreading stipules and ovoid achenes, and *T. flexuosum*, Reichb. (? of Bernhardi), with reflexed stipules and larger gibbous achenes, are with difficulty distinguishable.

3. *T. fl'avum*, *L.* ; stem furrowed, panicle compound, flowers erect crowded, anthers not apiculate.

Wet places, from Fife and Argyll southd., rare in Scotland ; local in Ireland ; fl. July-Aug.—*Rootstock* yellow, creeping, stoloniferous. *Stem* 2–4 ft., stout. *Leaves* 3-nately 2–3-pinnate ; leaflets 1–1 $\frac{1}{2}$ in., 3-lobed. *Panicle* sub-corymbose or pyramidal ; flowers pale yellow, often umbelled. *Sepals* small. *Anthems* bright yellow. *Achenes* 6–10, small, dark, 8-ribbed.—*DISTRIB.* Europe (Arctic), N. Asia.

VAR. sphaerocar'pum, Lej. ; panicle usually contracted, achenes broadly oblong.—*VAR. ripa'rium*, *Jord.* ; panicle usually lax, achenes oblong.—*VAR. T. Moriso'nii*, Gmel. ; panicle usually interrupted, fascicles of flowers small, achenes narrow oblong.

3. ANEMONE, *L.*

Perennial very acrid herbs. *Leaves* radical, lobed or divided. *Flowers* on 1- or more-fl'd. scapes, rarely yellow ; invol. leaves 3-partite. *Sepals* 4–20, petaloid, imbricate in bud. *Petals* 0. *Stamens* many, outer sometimes imperfect or petaloid. *Carpels* many ; ovule 1, pendulous. *Fruit* a head of sessile achenes, with naked or bearded styles.—*DISTRIB.* Cold and temp. regions ; species 70.—*ETYM.* ἀνεμος, the wind, of obscure application.

1. *A. Pulsatilla*, *L.* ; sepals 6 erect silky, outer stamens reduced to glands, achenes with long feathery styles. *Pasque-flower*.
 Chalk downs and limestone pastures ; York to Norfolk, Essex, and Gloucester ; fl. May–June.—Silky, 4–10 in. *Rootstock* stout, woody. *Leaves* maturing after flowering, 3-pinnatifid, segments linear ; involucre sessile, divided to the base into long linear segments. *Flower* 1 $\frac{1}{2}$ in., solitary, proterandrous, inclined in bud, dull purple ; peduncle lengthening after flowering. Imperfect *stamens* honeyed. *Styles* of silky achenes 1 $\frac{1}{2}$ in.—*DISTRIB.* Europe N. Asia to Dahuria.

2. **A. nemoro'sa**, *L.*; sepals 6 (rarely 5-9) oblong glabrous spreading, stamens all perfect, achenes with short straight styles. *Wood Anemone*. Woods and copses from Sutherland southd.; ascends to 2,800 ft. in the Highlands; Ireland; fl. April-May.—Nearly glabrous, slender. *Rootstock* horizontal, woody. *Scapes* 4-8 in. *Leaves* few, usually remote from the scape, petioled, 3-foliolate; leaflets narrow, sessile, cut lobed or pinnatifid; involucre like the radical, petioled. *Flower* solitary, 1-1½ in. diam., homogamous, honeyless. *Sepals* oblong, white, rarely purple. *Achenes* downy, as long as the style.—**DISTRIB.** Europe (Arctic), W. Siberia, N. America.

3*. **ADO'NIS**, *L.* PHEASANT'S-EYE.

Herbs, annual or perennial. *Leaves* much divided. *Sepals* 5-8, petaloid, imbricate in bud. *Petals* 5-16, yellow or red, eglandular. *Carpels* many; ovule 1, pendulous. *Fruit* a spike or head of many achenes; style short, persistent.—**DISTRIB.** Temp. Europe and Asia; species 3-4.—**ETYM.** classical.

A. AUTUMNA'LIS, *L.*; annual, flowers globose, petals broad concave. Naturalized in Suffolk, and S. counties, sporadic elsewhere, and in Scotland and Ireland; (alien or colonist, *Wats.*); fl. May-Sept.—*Stem* 8-10 in., erect, branched, very leafy. *Leaves* decomposed; segments small, linear. *Sepals* greenish. *Petals* scarlet, with a dark basal spot, suberect, rather longer than the sepals. *Head* of reticulated achenes sometimes elongate.—**DISTRIB.** Europe, W. Asia, N. Africa; introd. in America.

4. **MYOSU'RUS**, *L.* MOUSE-TAIL.

Small annual herbs. *Leaves* narrow, all radical. *Scapes* 1-fl. *Sepals* 5, rarely 6-7, with a small basal spur. *Petals* 5, rarely 6-7, or 0, small, narrow, tubular. *Stamens* few. *Carpels* many; ovule 1, pendulous. *Fruit* a long spike of densely packed achenes; style short, persistent.—**DISTRIB.** Europe, N. Asia, S. America, Australasia; species 2.—**ETYM.** *μῦς* and *οὐρά*, mouse-tail.

M. min'imus, *L.*; spike slender, style very short.

Cornfields, &c., from Northumberland to Kent and Devon; Channel Islands; fl. April-June.—Glabrous, 2-6 in. *Leaves* erect, many, linear, rather fleshy. *Scapes* many, slender. *Flowers* minute, yellow-green, proterandrous. *Sepals* 5, narrow-oblong; spur appressed to the scape. *Petals* 5; limb short, ligulate. *Spike* of achenes 1-3 in.; receptacle filiform; achenes attached ventrally, minute, keeled, back mucronate.—**DISTRIB.** Europe, W. Asia, N. Africa; introd. in America, &c.

5. **RANUN'CULUS**, *L.* BUTTERCUP, CROWFOOT.

Annual or perennial usually acrid herbs. *Leaves* entire lobed or compound; stipules membranous or 0. *Flowers* usually paniced, white or yellow (the British species). *Sepals* 3-5, caducous. *Petals* usually 5, rarely 0, glandular near or above the base. *Stamens* many. *Carpels* many; style short; ovule 1, ascending. *Fruit* a head or spike of apiculate or beaked

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Excerpt

[More information](#)

RANUNCULUS.]

RANUNCULACEÆ.

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achenes.—DISTRIB. All temp. regions; species about 160.—ETYM. *rana*, a frog.

SECTION 1. **Batra'chium**. Water- or marsh-plants. *Leaves* often submerged and multifid; stipules membranous. *Peduncles* usually leaf-opposed, 1-fld. *Flowers* proterandrous. *Petals* white; gland naked, yellow, basal. *Achenes* transversely wrinkled.

The following is an attempt to group naturally the British Batrachian *Ranunculi*, after a protracted study of the large collection at Kew (Herb. Kew, H. C. Watson, Borrer, Bot. Exch. Club, G. Nicholson, &c.). The result accords in a measure with the early views of H. C. Watson (Suppl. to Cybele, 1860; and Companion to ditto, 1868). Opinions vary as to whether the 8 forms or even ségregates of them should be ranked as one or more species, subspecies, or varieties; I regard them as approximately equivalent to the species I have retained under *Rubus*, *Rosa*, &c. Of the characters attributed to these and their subordinate forms by critical authors, I find some variable, others valueless, and still others deceptive; such especially as concern the tapering, &c., of the peduncle, the comparative length of stamens and petals, number of stamens, and especially the forms of the receptacle, achenes, and stigma.

* *Aquatic*. *Floating leaves* usually present; *submerged* numerous, multifid. *Petals* 5-9-nerved. *Receptacle* hispid.

1. **R. heterophyl'us**, *Fries*; segments of submerged leaves spreading in all directions, peduncles hardly exceeding the leaves, flowers $\frac{1}{2}$ -1 in. diam., petals broadly obovate, stamens numerous. *R. aquatilis*, Sm.

Streams and ponds from Orkney southd., ascending to 1,050 ft. in Scotland; Ireland; Channel Islands; fl. May-June.—*Floating leaves* (rarely 0), $\frac{3}{8}$ -1 $\frac{1}{2}$ in. diam., from orbicular to reniform, 3-5-lobed or -partite or 3-foliolate; basal sinus broad or narrow, segments broadly cuneate, toothed, lobulate, or laciniate; stipules broad, rounded. *Petals* much longer than the sepals. *Stamens* longer than the pistil. *Achenes* glabrous or hairy or hispid; stigma short, obtuse.—DISTRIB. Europe (Arctic), N. America, N. Asia.—*R. heterophyl'us* proper; segments of submerged leaves collapsing into a tassel when removed from the water, flowers about $\frac{1}{2}$ in. diam., achenes usually glabrous.—*R. pelta'tus*, *Fries* (*R. floribun'dus*, Bab., *R. trunc'atus*, Dumort.), has segments of submerged leaves more rigid, flowers $\frac{1}{2}$ -1 in. diam., petals broader, achenes usually hairy or hispid.—*R. fissifol'ius*, Schrank, is a form with laciniate leaf-lobes (Loch Maben, &c.).—*R. penicilla'tus*, Dumort. (*R. pseudo-fluitans*, Bab.), is a remarkable form with the habit, long robust stem and long leaves and peduncles, and large flowers of *fluitans*, but the hirsute receptacle of *heterophyl'us*; it forms the passage between the two. From Derby and Warwick, to Wilts and Surrey; Ireland.—*R. triphy'llos*, Wallr., from Guernsey, an imperfectly known plant, may be a form of *heterophyl'us*.

2. **R. mari'nus**, *Fries*; segments of shortly petioled submerged leaves spreading all round, peduncles much longer than the leaves, flowers $\frac{1}{4}$ - $\frac{3}{4}$ in. diam., petals narrowly obovate, stamens few or many. *R. aquatilis*, var. *Syme'i*, Hook. and Arn.

Brackish waters near the sea, from Caithness southd.; Ireland; fl. June-Sept.—*Floating leaves* reniform or broader than long, basal sinus broad, 3-lobed or -partite, segments sessile or petiolulate, cuneate, crenate or lobed; submerged not collapsing when removed from the water; stipules broad, rounded. *Petals* not touching, much longer than the sepals. *Stamens* shorter or longer than the pistil. *Achenes* very many, small, glabrous or hairy; stigma usually hooked.—DISTRIB. W. Europe.

The *R. marinus* proper (*i.e.* of Fries) has no floating leaves (like *R. salsuginosus*, Hiern), and few stamens.—*R. confusus*, Godr., is characterized by its more slender tapering peduncles, stamens many exceeding the pistil, ovoid-conic receptacles and $\frac{1}{2}$ -ovate compressed achenes narrowed upwards, and *R. Baudottii*, Godr., as having stout pedicels, stamens many not exceeding the pistil, long conic receptacles and $\frac{3}{2}$ -obovate achenes with inflated tops:—characters which I cannot verify as constant in either case.

** *Aquatic.* *Floating leaves rarely present; submerged numerous, multifid. Petals 5-9-nerved. Receptacles glabrous or hairy.*

3. *R. fluitans*, Lamk.; stems long robust, submerged leaves with few long narrow rigid tassel-like segments, peduncles much longer than the leaves, flowers $\frac{3}{4}$ -1 in. diam., petals broadly obovate, receptacle glabrous, achenes few large turgid. *R. peucedanifolius*, Schrank.

Rivers and running streams from the Clyde southd.; Ireland; fl. June-Aug.—*Stem* several feet long and usually stout. *Leaves* 3-9-in. long, long petioled, black, forming flaccid or rather rigid tassels; floating leaves very rare, 3-lobed or -partite or -foliolate, segments sometimes petiolulate; stipules broad, rounded. *Peduncles* very long and robust. *Petals* often more than 5, and 2-seriate. *Stamens* many, short or long. *Achenes* compressed, glabrous; stigma short, thick.—DISTRIB. Europe.—*R. Bächii*, Wirtg., is a small form, more slender, with subsessile more divided leaves and narrower petals.

4. *R. trichophyllus*, Chaix; submerged leaves usually subsessile, black and rigid, not collapsing when removed from the water, peduncles stout, shorter than the leaves, flowers $\frac{1}{2}$ - $\frac{1}{2}$ in. diam., petals small narrow distant, receptacle glabrous, achenes few. *R. pantothrix*, Brot. *Water-fennel*.

Still waters from Orkney southd.; Ireland; fl. May-June.—*Floating leaves*, if present, 3-lobed, -partite, or sometimes 3-foliolate, submerged; 2-3-chotomously multifid; stipules large, rounded. *Peduncles* about equalling the leaves, or shorter, not tapering. *Stamens* few, longer than the pistil. *Achenes* glabrous or hairy; stigma short, thick.—DISTRIB. Europe, W. Asia, Himalaya, N. America.—*R. Drouetii*, F. Schultz, has paler, more flaccid submerged leaves, the mid segment of the floating ones when present often deflexed.—*R. radians*, Rev., and *R. Godronii*, Gren., and *R. diversifolius*, H. Wats., are forms with floating leaves.—VAR. *confervoides* is a depauperated northern form from Rescobie Loch in Forfarshire, which is the original *R. aquatilis* of Linnæus's Flora Laponica. It is probably not rare in the north.

5. *R. circinatus*, Sibth.; floating leaves 0, submerged small sessile orbicular, segments in one plane rigid, peduncles much longer than the

leaves, flowers $\frac{3}{4}$ in. diam., petals broadly obovate, receptacle hispid, achenes glabrate or hispid acute. *R. divaricatus*, Schrank.

Still and slowly-flowing water from Forfar southd., not common; Ireland; fl. June-Aug.—Much the most distinct species of this section, very uniform in size, habit, and character. *Leaves* $\frac{1}{2}$ – $\frac{3}{4}$ in. diam.; stipules wholly adnate, like leaf-sheaths. *Peduncles* tapering. *Petals* twice as long as the sepals, many-veined. *Stamens* many, longer than the pistil. *Achenes* compressed; style slender deciduous.—DISTRIB. Europe (local), N. America.

*** *Marsh- or mud-plants, creeping, rarely floating. Submerged leaves 0 (very rare in R. tripartitus). Petals 3-5-nerved. Receptacle glabrous or nearly so.*

6. *R. tripartitus*, DC.; leaves $\frac{1}{2}$ -orbicular or reniform 3-lobed or partite, segments cuneate spreading, tips crenate, submerged when present very few and flaccid, peduncles shorter than the leaves, flowers $\frac{1}{4}$ in. diam., petals narrow, achenes few glabrous. *R. intermedium*, Hiern.

Marshes and ditches in S. and W. England; fl. May–July.—*Stem* aerial, or floating with emerged tips. *Leaves* $\frac{1}{2}$ – $\frac{3}{4}$ in. diam.; stipules broad, upper rounded free. *Peduncles* equalling the leaves or shorter. *Petals* 3-nerved, about twice as long as the calyx, pinkish. *Stamens* few, longer than the pistil. *Receptacle* slightly hairy. *Achenes* turgid; style slender, deciduous.—DISTRIB. W. Europe.—With difficulty distinguished from forms of *heterophyllus*.

7. *R. Lenorman'di*, Schultz; leaves all reniform or orbicular, lobes shallow, bases contracted, peduncles equalling the petioles, flowers $\frac{1}{4}$ – $\frac{1}{2}$ in. diam., petals remote oblong, receptacles glabrous, achenes many glabrous.

Marshes and ditches from the Clyde southd.; ascends to 1,600 ft. in Yorkshire; S. Ireland; fl. June–Aug.—*Stem* stout, branched, 2–8 in. long. *Leaves* $\frac{1}{2}$ –1 in. diam., often opposite, rounded and more crenate than *R. hederaceus*, never spotted; stipules large, broad. *Petals* 5-nerved, twice as long as the calyx. *Stamens* few, about equalling the pistil. *Achenes* with deciduous subterminal slender styles.—DISTRIB. N.W. Europe.

8. *R. hederaceus*, L.; leaves reniform angularly 5–7-lobed, lobes broadest at base, peduncles usually shorter than the leaves, flowers $\frac{1}{2}$ – $\frac{1}{2}$ in. diam., petals very narrow, distant, receptacle glabrous, achenes few obtuse. *Ivy-leaved Crowfoot*.

Shallow ponds and ditches from Shetland southd., ascends to 2,200 ft. in Wales; Ireland; Channel Islands; fl. May–Aug.—Habit of *R. Lenorman'di*. *Leaves* $\frac{1}{2}$ – $1\frac{1}{2}$ in. diam., usually opposite, with a $\frac{1}{2}$ -lunar black patch, lobes broader than long, rarely notched; stipules various. *Petals* 3-nerved, sometimes hardly exceeding the calyx. *Stamens* few, about equalling the pistil. *Achenes* small.—DISTRIB. W. Europe.—*R. homiophyllus*, Tenore (*R. cœnosus*, Guss.), is a floating form.

SECTION 2. *Hecato'nia*. Perennial, rarely annual. *Leaves* mostly radical, stipules obscure or 0. *Stems* 2- or more-flowered. *Sepals* 5. *Petals* 5, yellow. *Achenes* not tubercled (granulate in *R. ophioglossifolius*).

* *Leaves all undivided. Gland of petals with a small scale.*

9. **R. Lin'gua**, *L.*; perennial, erect, leaves sessile $\frac{1}{2}$ -amplexicaul lanceolate entire or toothed, achenes pitted, style broad. *Great Spear-wort.*

Marshes and ditches, from Aberdeen southd.; local in Ireland; Channel Islands; fl. July-Sept.—Glabrous. *Root* densely fibrous. *Stem* 2-3 ft., hollow; lower nodes rooting. *Leaves* 6-10 in. $\frac{3}{4}$ -1 in. broad, veins parallel and reticulated. *Flowers* 2 in. diam., handsome, sub-paniced.—*DISTRIB.* Temp. Europe, N. and W. Asia to the Himalaya.

10. **R. Flam'mula**, *L.*; perennial, suberect creeping or ascending, leaves petioled linear- or ovate-lanceolate nearly entire, achenes minutely pitted, style minute subulate. *Lesser Spear-wort.*

Wet places; ascends to 2,700 ft. in the Highlands; Ireland; Channel Islands fl. June-Aug.—Very variable, glabrous or slightly hairy, 4-12 in. *Lowest leaves* petioled, ovate, upper more lanceolate and sessile. *Flowers* yellow, rarely $\frac{3}{4}$ -in. diam., proterandrous. *Head* of achenes small.—*DISTRIB.* Europe (Arctic), N. Asia, Africa, and America.

R. FLAM'MULA proper; prostrate or erect, internodes straight, style of achenes short obtuse.

Sub-sp. **R. REP'TANS**, *L.*; creeping, very slender, internodes arching, style of minute achenes subcylindric, style recurved. Sandy shores of Loch Leven. (N.W. Europe, Canada.)

11. **R. ophioglossifolius**, *Villars*; annual, erect, lower leaves long-petioled broadly ovate or cordate, petals scarcely longer than the sepals, achenes small hairy minutely granulate, style minute.

Marshes, S. Hants; Jersey (extinct); fl. June-Aug.—Glabrous or slightly hairy upwards. *Root* fibrous. *Stem* 6-10 in. or more, slender, decumbent at the base, branched, hollow, furrowed. *Peduncles* furrowed. *Flowers* many, $\frac{1}{4}$ in. diam.—*DISTRIB.* W. and S. Europe.

** *Radical leaves divided, upper cauline entire. Gland of petals without a scale.*

12. **R. auri'comus**, *L.*; perennial, leaves orbicular 3-lobed or -partite, segments of lower obtuse cuneate cut, of upper linear spreading, sepals spreading pubescent, head of downy achenes globose. *Goldielocks.*

Woods and copses, from Aberdeen southd.; ascends to 1,600 ft. in the Highlands; S. and W. Ireland rare; Jersey; fl. April-May.—Erect, 6-10 in., branched, slender, glabrous or slightly hairy upwards. *Root* fibrous. *Radical leaves* long-petioled. *Peduncles* not furrowed, pubescent. *Flowers* $\frac{3}{4}$ in. diam., seldom regular. *Petals* larger than the downy sepals, bright yellow, often imperfect (var. *depauperata*). *Achenes* on tubercles of the receptacle, compressed; style slender, subulate, curved.—*DISTRIB.* Europe (Arctic), N. and W. Asia to the Himalaya.—Not acrid.

13. **R. scelera'tus**, *L.*; annual, erect, leaves glabrous 3-lobed or -partite, segments of lower lobed obtuse, of upper linear subentire, sepals reflexed hairy, head of small glabrous achenes oblong.

Ditches, &c., from Ross southd.; Ireland; Channel Islands; fl. May-Sept.—*Root* fibrous. *Stem* 8-24 in., subcorymbose above, hollow. *Leaves* variable

in lobing, upper a little hairy. *Flowers* $\frac{1}{2}$ in. diam., proterogynous. *Achenes* many, small, faces a little wrinkled, dorsal edge furrowed; style minute.—**DISTRIB.** Europe (Arctic), N. Asia, N. India to Bengal; introd. in America, &c.—Very acrid.

*** *Perennials. Radical leaves divided, upper cauline entire. Glands of petals with a small scale.*

14. **R. a'cris**, *L.*; hairy, erect, without runners, leaves 3-7-partite, segments of lower cuneate deeply cut and lobed, peduncles not furrowed, sepals spreading pubescent, receptacle glabrous, achenes compressed margined glabrous, style hooked.

Meadows, &c., N. to Shetland; ascends to nearly 4,000 ft. in the Highlands; Ireland; Channel Islands; fl. April-Sept.—*Rootstock* straight. *Stem* 8 in.-3 ft. *Leaves* usually all petioled, orbicular or 5-angled in outline, uppermost sessile. *Flowers* 1 in. diam., proterandrous, spreading.—**DISTRIB.** Europe (Arctic), N. Asia; introd. in America.

VAR. *R. vulgaris*, Jord.; rootstock creeping horizontal or slightly inclined.

VAR. *R. Borae'nus*, Jord.; stem glabrous below, leaf-segments very narrow.

VAR. *R. tomophyllus*, Jord.; rootstock nearly erect, leaf-segments very narrow

15. **R. re'pens**, *L.*; hairy, stem decumbent below with long runners, leaves 3-foliolate or 3-nately pinnatisect, segments cuneate lobed and toothed, peduncles furrowed, sepals spreading hairy, receptacle slightly hairy, achenes compressed margined glabrous, style hooked.

Waste ground from Sutherland southd.; ascends to 2,700 ft. in the Highlands; Ireland; Channel Islands; fl. May-Aug.—*Rootstock* stout, short. *Stem* 8 in.-2 ft. *Leaves* petioled, triangular or ovate; segments variable, middle usually longest. *Flowers* 1 in. diam. *Petals* generally suberect.—**DISTRIB.** Europe (Arctic), N. and W. Asia, N. Africa; introd. in America.

16. **R. bulbo'sus**, *L.*; erect, hairy, stem swollen at the base without runners, leaves 3-foliolate or ternatisect, segments lobed, peduncles furrowed, sepals reflexed and receptacle hairy, achenes compressed margined glabrous, style short hooked.

Meadows, &c., from Caithness southd.; ascends to 1,500 ft. in the Highlands; Ireland; Channel Islands; fl. May-July.—*Stem* 6-12 in., base often as big as a walnut, sometimes corymbose above. *Leaves* variable in form and lobing. *Flowers* $\frac{1}{2}$ to 1 in. diam.—**DISTRIB.** Europe, Asia, N. Africa; introd. in America.

17. **R. ch'erophyl'us**, *L.*; erect, silkily hairy, stem swollen at the base with tuberosus offsets, leaves (of young plant entire) 3-foliolate or ternatisect, peduncles not furrowed, sepals spreading, receptacle glabrous, hairy head of compressed glabrous acute dotted achenes cylindric-oblong.

Jersey, St. Aubin's Bay; fl. May.—*Root-fibres* stout. *Stem* 6-12 in., usually simple, slender, 1-fld., neck clothed with dry matted fibres. *Leaves* of young plant orbicular or broadly cuneate, toothed or lobed; later formed leaves very variable in lobing or cutting. *Flowers* $\frac{3}{4}$ -1 $\frac{1}{2}$ in. diam., bright yellow, proterandrous. *Achenes* very numerous, small, simply acute.—**DISTRIB.** France, Mediterranean region to Syria.

SECTION 3. *Echinella*. Annual, rarely biennial. *Leaves* radical and cauline, divided; stipules inconspicuous. *Sepals* 5. *Petals* 5, yellow. *Achenes* tubercled or spinose, compressed, margin thickened.

18. *R. hirsutus*, *Curtis*; erect, leaves 3-lobed or -partite, segments obtuse cut, peduncles furrowed, sepals reflexed hairy, petals with a scale over the gland, receptacle hairy, achenes tubercled towards the margin, style straight. *R. Philonotis*, Ehrht.

Damp ground from Argyll and Forfar southd.; rare in Scotland; not in Ireland; Channel Islands; fl. June–Oct.—Hairy. *Stems* many, 6–18 in. *Leaves* variable in lobing. *Flowers* about 1 in. diam., peduncles with spreading or reflexed hairs. *Achenes* broad, much flattened.—DISTRIB. Europe, W. Asia, N. Africa.—The earlier names of *R. parvulus*, L., and *R. Sardus*, Crantz, are superseded for being too inappropriate.

19. *R. arvensis*, *L.*; erect, lowest leaves obovate or cuneate toothed, upper 3-partite or -foliolate, segments narrow cut, peduncles not furrowed, sepals spreading, petals gland with a scale, receptacle hairy, achenes usually covered with hooked spines, style stout hooked.

Cornfields, from Perth southwd.; in Ireland near Dublin only; (a colonist, *Wats.*); fl. May–July.—Nearly glabrous. *Stem* 6–24 in., solitary. *Leaves* variable. *Flowers* $\frac{1}{2}$ in. diam., pale. *Petals* suberect. *Achenes* few, large.—DISTRIB. Europe, temp. Asia to India, N. Africa.

20. *R. parviflorus*, *L.*; slender, decumbent, leaves orbicular or reniform 3-lobed, segments toothed, peduncles furrowed, sepals reflexed, petals 3–5 small oblong, gland with an obscure scale, receptacle glabrous, achenes faced with hooked tubercles, style short nearly straight.

Dry banks, &c., from Durham southwd.; Ireland, rare; Channel Islands; fl. May–Aug.—Hairy. *Stems* and branches spreading, 6–8 in. *Leaves* divided to the middle or less, lowest often entire, uppermost more deeply cut into linear lobes. *Peduncles* leaf-opposed or in the forks. *Flowers* $\frac{1}{3}$ – $\frac{1}{4}$ in. diam. *Achenes* small.—DISTRIB. Europe from Denmark southwd., W. Asia, N. Africa; introd. in America.

SECTION 4. *Ficaria*, *DC.* (gen.). Perennial. *Leaves* opposite, chiefly radical, entire. *Sepals* 3–5. *Petals* 8–12, yellow; gland with a scale. *Achenes* small, not beaked.

21. *R. Ficaria*, *L.*; leaves cordate obtusely angled or crenate, achenes globose smooth, style minute. *Pilewort* or *Lesser Celandine*.

Pastures and waste places, N. to Shetland; ascends to 2,400 ft. in Wales; Ireland; Channel Islands; fl. March–May.—Glabrous. *Root-fibres*, stout, cylindrical. *Stem* short, decumbent, branched at the base. *Leaves* variable; petiole stout with a base dilated. *Peduncles* stout, axillary, 1-fl. *Flowers* about 1 in. diam., bright yellow, sometimes apetalous, proterandrous. Head of *achenes* globose; *Cotyledon* solitary (one suppressed).—DISTRIB. Europe (Arctic), W. Asia, and N. Africa.

VAR. *divergens*, *F. Schultz*; lobes of lowest leaves not overlapping at the base, lowest sheaths narrow.—VAR. *incumbens*, *F. Schultz*; lobes of lowest leaves overlapping at the base, lowest sheaths amplexical.