

NOTES ON *RUMEX ACETOSA* L. IN THE BRITISH ISLES. (BEITRAG ZUR  
KENNTNIS VON *RUMEX* No. XV)\*

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After having monographed *Rumex* for all the continents except Europe, and after having published a treatment of the central European species in the second edition of Hegi's *Flora von Mittel-Europa* (1958) and written one for "Flora Europaea" (unpublished) it became apparent that most of the major taxonomic problems have been solved more or less satisfactorily except two. One is *Rumex crispus* L., of the subgenus *Rumex* (formerly *Lapathum*), a polymorphic species evidently comprising several races characterized by slight morphological differences, some of them also ecologically different. But all these races are evidently interfertile and some of them are extremely invasive, and by their extensive spread and interbreeding they seem to have obscured the original distributional pattern of the other races. The second problem still unsolved is *Rumex acetosa* L. in a broader sense. In my treatment of *Rumex* in Hegi's *Flora von Mittel-Europa* as well as in "Flora Europaea" I had to admit that the treatment of this species and of its allies is still a tentative one and far from satisfactory.

The traditional way of distinguishing *R. acetosa* from the most closely allied European species is as follows :

- 1a. Branches of inflorescence not branching. Leaves 2 to 6 times as long as broad. Valves 3.0-3.5 mm. long. (Indigenous) *R. acetosa*.
- 1b. Branches of inflorescence (at least the lower ones) repeatedly branching. Valves smaller.
  - 2a. Leaves 4-14 times as long as broad. Valves 2.5-3.3 mm. long. (E. Europe and Asia).  
*R. thyrsiflorus* Fingerh.
  - 2b. Leaves 2-4 times as long as broad. Valves 3 (-4) mm. long. (Not known in wild state, cultivated as a vegetable and escaped from cultivation).  
*R. ambiguus* Gren.

*R. acetosa* is represented in the British Isles by at least four different taxa, which seem to be ecologically and to a certain extent also geographically differentiated.

1. A widely distributed and rather variable meadow type. Stem single or few from the short rootstock, straight upright, 30-70 (-100) cm. high. Stem leaves several to many, scattered nearly equally over the whole length of the stem; at least the inner basal leaves and the stem leaves acute and with acute lobes. Inflorescence often loose.

2. A coastal cliff ecotype (See plate 4) known to me so far only from sea-cliffs in Cornwall, Zennor, 20 July, 1839, C. C. Babington (Herb. Univ. Cantab. (CGE)), and a very similar if not identical plant also observed by myself in July 1959 in similar habitats along the north coast of Spain, Cabo Penas near Santander. Stem single from a short rootstock, stout, usually 15 (not more than 30) cm. high, with few, usually 2 to 3, stem leaves only. All leaves thickish when alive, becoming soft and membranaceous when dry, about twice as long as broad, rounded at the tip, basal lobes short, rounded. Inflorescence contracted.

3. A mountain ecotype seen from a few localities in the Scottish highlands. Stem low, 15-30 cm. high, sometimes several from the short rootstock. Leaves often rather short and rounded with short basal lobes. Stem leaves few, sometimes several from the short rootstock. Inflorescence small,  $\pm$  contracted.

4. A coastal arenicolous ecotype known from the Atlantic coast of Ireland and the Outer Hebrides. Rootstock branching, with elongated straggling shoots emitting either leaf rosettes or flowering stems; the latter procumbent or ascending, often flexuous, thin,

\* See list of references for previous *Beiträge*

with either elongate short branching or abbreviated nearly simple inflorescences. Leaves very small, fleshy when alive, the basal ones 2-3, the stem leaves 3-4 (-5) times as long as broad, mostly acute with acute deflexed basal lobes.

No. 1 corresponds to the most widely spread form which is also represented by Linnaeus's type.

No. 2 looks very distinctive, especially when alive, but I still hesitate to give it taxonomic recognition as my field experience is limited to one locality in north Spain, and as I have seen only one good fruiting herbarium specimen from Britain.

No. 3 is very imperfectly known to me from a few and incomplete herbarium specimens. It may possibly be identical with one of the taxa described from Fennoscandia as *R. acetosa* ssp. *lapponicus* Hiitonen and *R. fontano-paludosus* Kalela, the status of which is still doubtful to me.

No. 4 is the most striking of all. The first specimens I saw were those collected by Miss M. Scannell in west Ireland on sand dunes, Annagh Bay, West Mayo, 19 June 1958, in fruit, and preserved at the Irish National Herbarium. A duplicate of this specimen has been kindly presented to me by Miss Scannell and it is now in the Vienna herbarium. On 15 September, 1960, I saw the same plant growing along Dog's Bay near Roundstone, Co. Galway, on an excursion led by Prof. David Webb. Owing to the advanced season the plant had no flowers nor fruits and it looked so strange to me that I could not even recognize it as a *Rumex*. Several specimens were dug up and Prof. Webb kindly undertook to cultivate them. An excellent flowering specimen of the same taxon from sand dunes on the Atlantic coast of the Isle of Barra, Outer Hebrides, 21 June 1946, *Mrs. L. Cunningham*, is in the Kew Herbarium, and an incomplete specimen in the Cambridge herbarium, also from the Outer Hebrides, Monach Island, black sandy calcareous soil, 23 August 1949, *F. H. Perring*, evidently belongs to the same taxon. No arenicolous representative of the *R. acetosa* group was known before, as far as I know, and there is no sign of intergradation. It seems therefore advisable to give the plant specific rank in spite of the absence of distinctive fruit characters. As soon as the area of this interesting plant is better known, and, if it is indeed isolated from the other representatives of the *R. acetosa* group, as I suspect, speculation might take place whether it belongs to the coastal Atlantic element, which might have survived glaciation. The few known localities might be a hint to a similar pattern of distribution as that of *Pedicularis sylvatica* L. subsp. *hibernica* Webb (1956), which is however ecologically different from *R. hibernicus*, being a plant of blanket bogs.

***Rumex hibernicus*** Rech. f., *n.sp.* (Plate 5) Subgen. *Acetosa* Sect. *Acetosa*. Rhizoma tenue, longe repens. Caules floriferi arcuato-flexuosi vel -ascendentes, 13-20 cm. tantum alti. Folia omnia parva, in vivo certe carnosa, in sicco crassiuscula. Folia basalia 1.5-2.5 cm. longa, 0.5-1 cm. lata, scutato-hastata, apice acuta, lobis basalibus acutis deflexis, margine interdum  $\pm$  crispulis. Petiolus laminam aequans usque ea duplo longior. Folia caulina pauca sensim brevius petiolata, elongata, summa anguste linearia, margine reflexa, 20-30 mm. longa, 15-20 mm. lata, omnia lobis basalibus angustis acutis deflexis. Inflorescentia subsimplex usque breviter pauciramosa. Pedicelli filiformes quam valvae breviores. Perigonii foliola exteriora ca 1.5 mm. longa, basi connata, reflexa. Valvae (perigonii folia interiora) in statu fructifero  $\pm$  3 mm. longae,  $\pm$  4 mm. latae., basi leviter cordatae, margine subintegrae vel valde indistincte sinuato-denticulatae vel subcrenulatae, tenuiter membranaceae, tenuiter reticulato-nervosae, pallide brunnescenti-virescentes interdum purpureo-suffusae, basi sub emarginatione callo minutissimo applanato reflexo provisae. Nux submatura  $\pm$  2 mm. longa, atrobruane, nitens.

Typus : West Ireland, Annagh Bay, Mullett Peninsula, West Mayo (v.c. H 27) (*M. Scannell*, W, DBN).

Geographical distribution : v.c. 110, Outer Hebrides, Isle of Barra, sand dunes on the Atlantic coast, 21 June 1946, *Mrs. L. Cunningham* No. 22 (K); H 12, Wexford, sand dunes, Ballyteigue Burrows, 22 May 1961, *Miss M. Scannell*; H 16, W. Galway, Dog's Bay near Roundstone, Connemara, D. A. Webb and K. H. Rechinger (no herb spec.);

H 27, W. Mayo, Annagh Bay, Mullett Peninsula, 19 June 1958, *M. Scannell* (W, DBN) (type locality); rocky pasture, Achill Head, Achill I., 23 June 1961, *Miss M. Scannell*; sand dunes N. of Glosh, Hullet, 12 June 1961, *Miss M. Scannell*; sand dunes S. of Annagh Head, Mollet, 12 June 1961, *Miss M. Scannell*; H 35, W. Donegal, sand dunes, Cruit Island, 24 June 1961, *Miss M. Forsyth*.

By this paper I want to draw the attention of the botanists of the British Isles to the *R. acetosa* group and to its problems. Complete fruiting herbarium material, especially from the coastal and highland districts, showing the subterranean parts would be most welcome to the author. Notes on the habitat and whether or not other representatives of the *Rumex acetosa* group were growing in the neighbourhood, and whether or not intergradation takes place, would also be most welcome. Specimens might either be sent directly to the Botany Department, Natural History Museum, Vienna, Burgring 7, Austria, or c/o the Keeper of the Kew Herbarium or the Keeper of Botany, British Museum, S. Kensington.

I wish to express my thanks to Miss M. Scannell, Dublin, for presenting duplicate specimens of the type to the Vienna Herbarium, to Prof. D. A. Webb, Dublin, for his generous hospitality and for taking me along on an excursion to the west coast of Ireland in the course of which *R. hibernicus* was observed growing, to the Keepers of the Kew and of the Cambridge herbaria for photographs of herbarium specimens, published herewith, and to Mr. J. E. Lousley for correcting the manuscript.

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