

***Rumex* × *akeroydii* – a new Dock hybrid**

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## ABSTRACT

A new *Rumex* L. (Polygonaceae) hybrid is described and illustrated. A single robust plant of *R. × akeroydii* Rumsey hybr. nov. (*R. palustris* Sm. × *R. cristatus* DC.) was discovered growing with its parents on the Inner Thames Marshes SSSI, Rainham, S. Essex in 1991.

KEYWORDS: hybridisation, Essex.

## INTRODUCTION

While surveying the distribution of locally and nationally scarce taxa on the Inner Thames Marshes SSSI (Site of Special Scientific Interest) at Rainham Marshes, S. Essex (Grid reference TQ/5.8) in the summer of 1991, a striking *Rumex* hybrid was discovered at the head of a then dry drainage ditch. The area, previously used as rifle ranges, grazing marsh and silt lagoons, borders commercial transport and light engineering works. At the time of the visit in late August, the site was very dry and appeared somewhat derelict as a result of the apparent cessation of grazing and other management. Scarce ruderal species of open vegetation such as *Puccinellia rupestris* (With.) Fernald & Weath., previously present in cattle-poached areas by drainage dykes, were absent. The drainage dykes which cross the grassland did, however, still locally support healthy populations of the nationally scarce docks *R. maritimus* L. and *R. palustris* Sm.

The areas bordering on Ferry Lane, which skirts the site on two sides, support a rich alien flora and have long been a hunting ground for those interested in such plants. A *Heracleum* sp., identified as *H. mantegazzianum* Sommier & Levier, but perhaps not that species, has been naturalized here since at least the 1920s and the alien dock species *Rumex obovatus* Danser and *R. patientia* L. (as subsp. *patientia*) have both been reported in this general area (Jermyn 1974). The most frequent (and perhaps only) member of the *R. patientia*/*R. cristatus* group present in 1991 was *R. cristatus* DC. (specimens confirmed by Dr J. R. Akeroyd). Whether this is the result of an earlier mis-identification, or more recent colonisation and perhaps ousting of *R. patientia* by *R. cristatus* is impossible to state in the absence of any earlier voucher specimens. *R. cristatus* is, in my experience, much the commoner on waste ground on the clay soils along the Essex side of the Thames estuary and would seem to still be increasing.

*R. cristatus* was infrequent away from the roadside but scattered plants could be found extending onto the grassland area at Rainham previously used for the rifle ranges and grazing. One such plant, a rather depauperate example at the head of a drainage ditch, was growing with an unfamiliar, striking, robust plant recognized in the field as a hybrid due to its intermediate appearance and sterility. The base of the ditch supported an open vegetation dominated by a large stand of *R. conglomeratus* Murr. with scattered plants of *R. palustris* and *R. maritimus* occurring within 25 m, further down the same ditch. A single example of the hybrid *R. conglomeratus* × *R. palustris* (*R. × wirtgenii* Beck), conspicuous by virtue of its highly abortive fruits, and apparently unrecorded previously in S. Essex, also occurred in this ditch.

The stature of the ditch-head hybrid, with shoots up to c. 1.5 m tall, and its close proximity to *R. cristatus* clearly implicated that as one parent. In leaf and shape of the perianth segments the plant was clearly intermediate between this taxon and *R. palustris*; the dentation of the margins of the perianth-segments (valves) ruled out *R. conglomeratus* and the teeth were coarser than would be expected had *R. maritimus* been involved. Furthermore, the plant did not show any sign of the distinctive golden coloration that *R. maritimus* assumes when fruiting. Somewhat surprisingly,

given the ease with which *Rumex* species hybridise and the researches of many in the detection of such hybrids (e.g. Rechinger 1964; Lousley & Kent 1981), the cross between *R. cristatus* and *R. palustris* has apparently not hitherto been found. This is probably because their native ranges barely overlap (Jalas & Suominen 1979; Akeroyd 1993). Accordingly a name and illustrated description of this plant are given here.

#### TAXONOMIC DESCRIPTION

##### ***Rumex* × *akeroydii* Rumsey, hybr. nov.**

(*Rumex cristatus* DC. × *R. palustris* Sm.) (Fig. 1)

Hybrida inter *Rumex cristatus* DC. et *R. palustris* Sm., characteribus inter parentes variantes; planta robusta, valvae fructiferae 4–7 mm longa, acute et irregulariter denticulatae, dentibus angustibus ad summum 2 mm, seminibus praecipue sterilibus.

Robust, erect perennial herb up to c. 1.5 m tall, the basal leaves narrowly ovate-lanceolate, cuneate. Inflorescence moderately dense, with erecto-patent to patent branches, leafy throughout. Valves cordate, suborbicular to triangular, 4–7 mm long, denticulate to dentate with spreading narrow teeth to c. 2 mm long. All valves with distinct tubercles, one larger, the other two subequal.

HOLOTYPE: Rainham Marsh, at head of drainage ditch, S. Essex, v.c. 18, TQ/520.813, putative parents close by, 27 August 1991, *F. J. Rumsey* (RNG); isotypus (BM).

The specific name honours Dr John Akeroyd, who confirmed the identity of this hybrid, has done much to raise interest in this genus in Britain and Ireland, and like this taxon is a robust denizen of waste places.

#### DISCUSSION

This new hybrid is only likely to be confused with *R. palustris* × *R. patientia* (*R. × peisonis* Rech.), a hybrid as yet unreported from the British Isles. *R. × akeroydii* would be expected to show more irregularly dentate valve margins, but might only reliably be discriminated by cytological studies, *R. cristatus* having  $2n = 80$ , *R. patientia*  $2n = 60$  (Lousley & Kent 1981).

The recognition of *R. cristatus* as specifically distinct from *R. patientia* has been questioned (Stace 1997). Akeroyd (1993) adopted a conservative approach and maintained it, with some reservations. In its consistently dentate valve margins, darker nutlet colour and leaf venation more nearly at right angles to the midrib, *R. cristatus* can always clearly be morphologically separated from the variable *R. patientia*. These characters and the cytological differences referred to above argue for their continued recognition at specific level.

*R. × akeroydii* could occur anywhere in the sympatric range of the parent species (Fig. 2). *R. palustris* has a wide range across central and southern Europe, extending northwards to Denmark and southwards to central Greece. *R. cristatus* is restricted to Greece and the Aegean region, southern Albania, Cyprus and Sicily. The two only naturally overlap in the southern Balkans, where *R. palustris* is rather uncommon. The apparent lack of this obvious hybrid in the region may be the result of under-recording but probably reflects a genuine absence, the species being effectively isolated by habitat preferences. This is also largely true in Britain, where neither species is at all common but both may be locally abundant. In Britain *R. palustris* is almost restricted to wet nutrient-rich mud exposed in the late summer and autumn (Mountford 1994), whereas *R. cristatus* is a plant of dry ruderal waste places. In only a few localities will the species grow in close enough proximity for pollination and hybridisation to occur. The grazing marshes of the Thames estuary, with their cattle-disturbed wetlands, often in proximity to industrial sites, railways, roads, etc., provide suitable habitats for the formation and establishment of such *Rumex* hybrids. A range of very rare hybrids, such as *R. crispus* × *R. maritimus* (*R. × fallacinus* Hausskn.), *R. conglomeratus* × *R. maritimus* (*R. × knafii* Celak) and *R. obtusifolius* × *R. cristatus* (*R. × lousleyii* Kent) have been recorded from the Rainham, Pitsea-Bowers Gifford and Hadleigh Marshes further east (see Jermyn 1974, Stace 1975), to which can now be added *R. × akeroydii*.

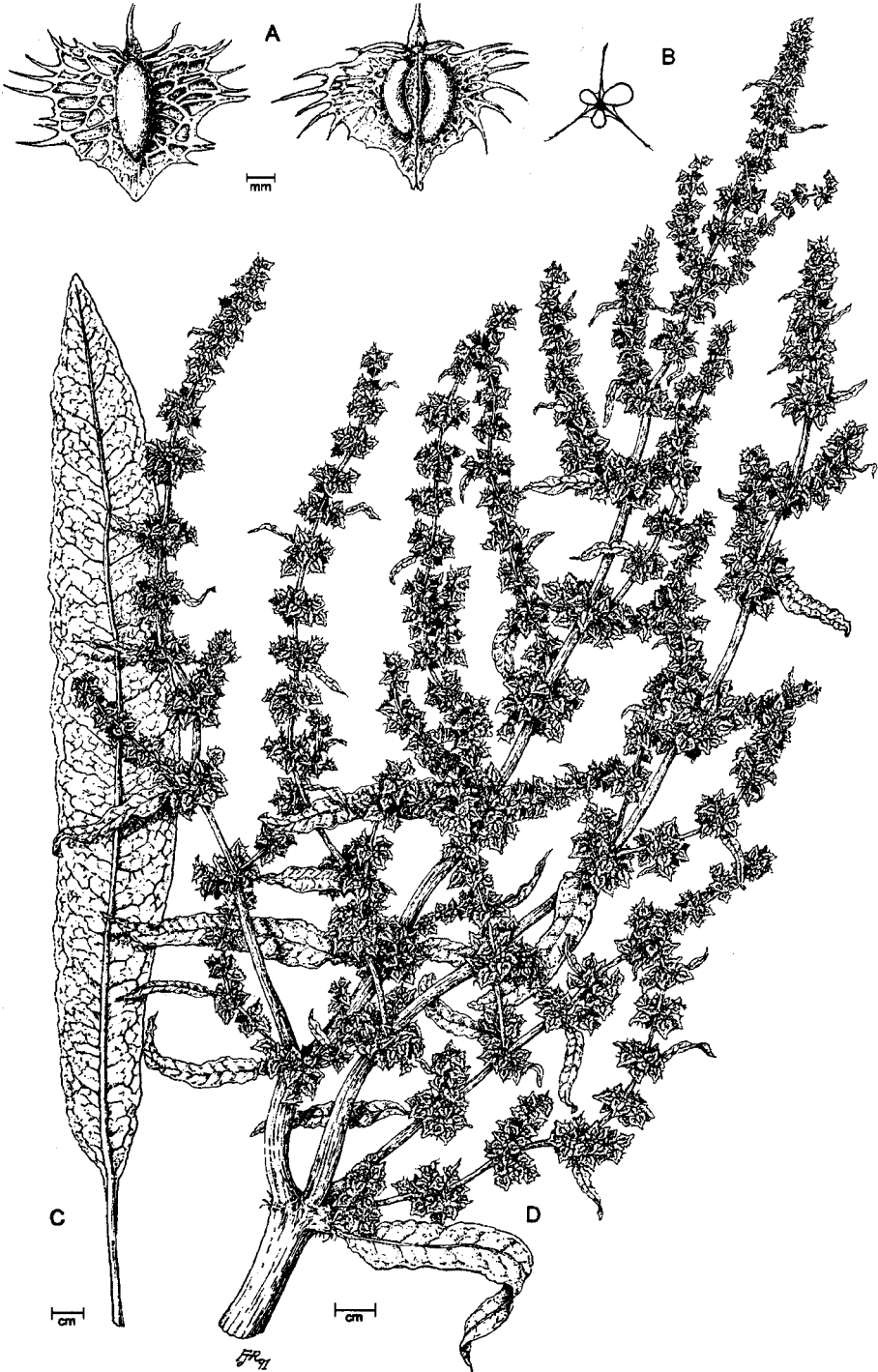


FIGURE 1. *Rumex*  $\times$  *akeroydii*. A. Fruit, i.e. perianth enclosing nutlet. B. Diagrammatic section through fruit to show relative size of tubercles. C. Basal leaf. D. Inflorescence.

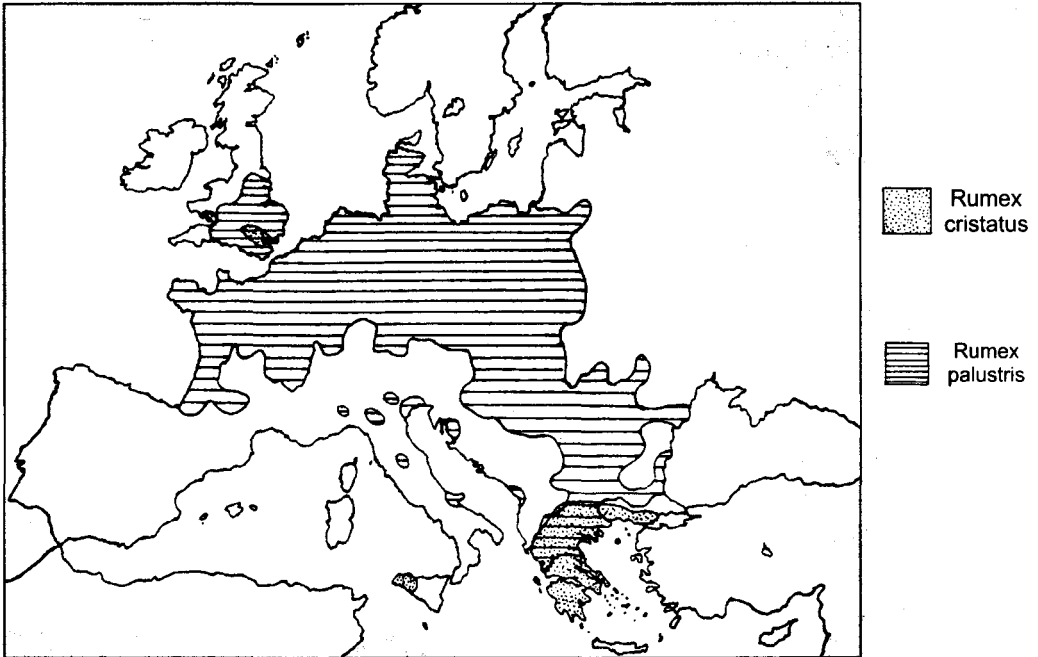


FIGURE 2. Distribution of *R. palustris* and *R. cristatus* (somewhat diagrammatic – based on Jalas & Suominen (1979)).

The current status of the plant seen in 1991 is uncertain, as is the future of the site upon which it grew. Once foreseen as part of the route of the Channel Tunnel rail-link, then considered as the possible site of a theme park, the area is, in part, now the subject of a development proposal by Havering Council.

#### ACKNOWLEDGMENTS

I am very grateful to John Akeroyd for determining the specimen and for his enthusiastic attempts to encourage my interest in this genus.

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(Accepted November 1998)