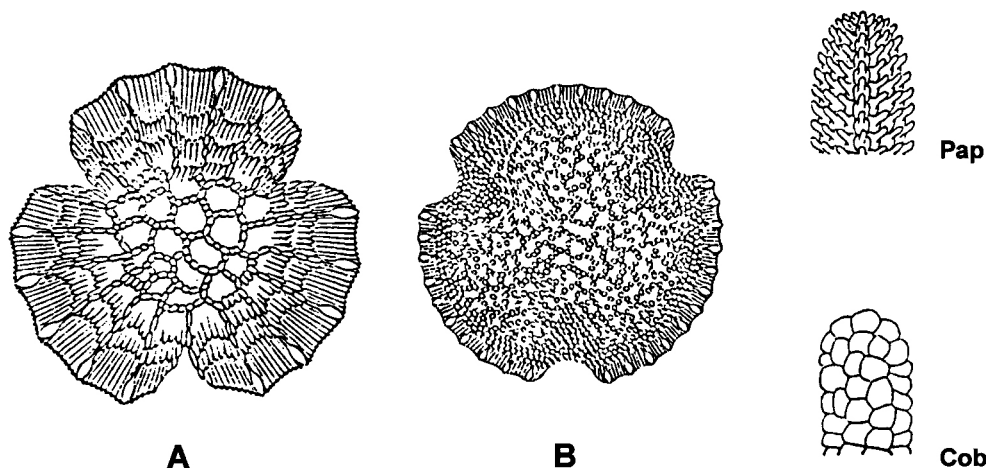


LIMONIUM VULGARE / L. HUMILE

Difficulty arises in separating these two species most often at sites where they grow together. A wide range of morphological forms with varying degrees of intermediacy may be found alongside typical examples of both species. This variability is not environmentally determined as once thought; hybridisation and subsequent introgression account for a substantial part of it (Dawson & Ingrouille 1995).

There are a number of morphological characters which may be used to distinguish the two species, although there is overlap and no one character can be used (see Stace's *New Flora*). Spike length is a debatable character; in east coast and Solent forms of *L. humile* Mill., spike length is plainly longer than in *L. vulgare* Mill., but taximetric analysis of 'pure' forms of *L. humile* from Ireland and W Wales show it is similar to *L. vulgare*. There are no significant differences between species concerning branching above or below the middle of the stem.

Confirmation of identification can only be obtained by microscopic examination of pollen and stigmas, which does require some experience due to wider range of variation than previously recognised (cf. Dawson & Ingrouille 1995). In *L. vulgare* there is a dimorphism of pollen and stigmas, "B+Pap" forms having a papillate stigma associated with B type pollen (see diagram). "A+Cob" forms have longer cob styles and A type pollen (if flowers are seen with long-exserted styles they are almost certainly "A+Cob" morphs of *L. vulgare*). *L. humile* has an "A+Pap" morph combination.



Pollen and stigmas of dimorphic *Limonium*. The two pollen types, A & B, are shown, diameter c. 60 μ m, and the two stigma types, diameter c. 100 μ m (after H. G. Baker).

Reference Dawson, H. J. & Ingrouille, M. J. (1995). *Watsonia* **20**: 239-254.

Author H. J. Dawson, February 1988, updated T. C. G. Rich, 1997.