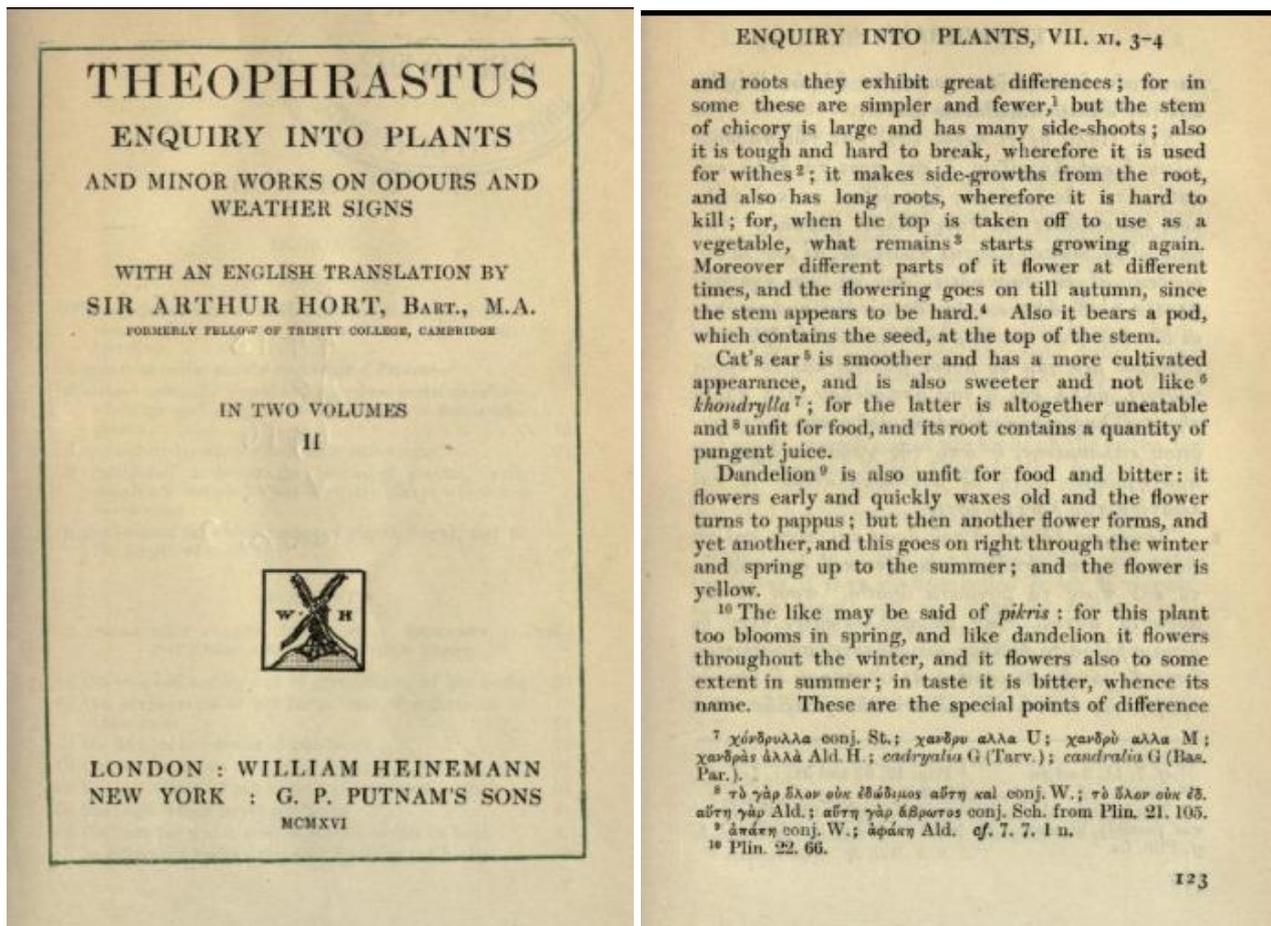


Hypochaeris & Leontodon

HYPOCHAERIS

The main species found in the Ireland are *H. radicata* (Cluas chait) and *H. glabra* (Cluas chait mhín). *H. radicata* is very common and will grow on most soils. *H. glabra* has a much more restricted range and has been recorded on northern coasts. The plants produce latex, have basal leaves and no rhizomes or stolons.

FOOD & AGRICULTURE



H. radicata (cat's ears), described by Theophrastus, *Historia Plantarum* (c.350 BC – c. 287 BC)

Peter Wyse Jackson describes *H. radicata* leaves as edible, if a bit bitter. They are widely used in Mediterranean countries for food and were possibly used in Ireland in the past⁵. His book also gives an account of children picking *H. radicata* (casterbhan), *Stellaria media*, *Senecio vulgaris* and possibly *Cirsium vulgare* from ditches and dry banks (Danaher, 1964). This mixture was chopped and added to chicken feed.

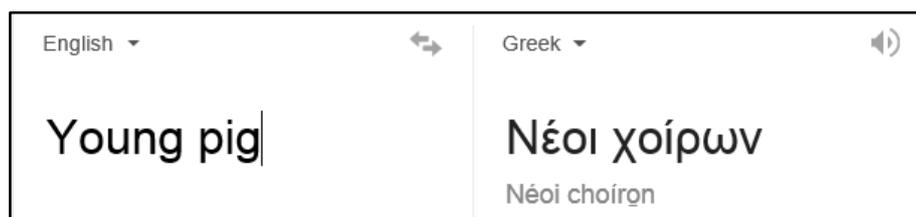
In Australia *H. radicata* is associated with Stringhalt, this condition may occur in horses that graze in pastures during drought or very dry conditions. Stringhalt causes sudden flexion of the hind limbs and an abnormal gait. Most animals usually recover if removed from poor pastures and are given an improved diet. *Rumex acetosella*, *Elymus repens* have been identified in these poor pastures, they or a possible mycotoxin in the soil may also be associated with the condition.

HABITAT AND SOME LOCATIONS IN IRELAND

H. radicata is a plant of many man-made and natural habitats and has been recorded in all counties of Ireland for example on roadside verges, frequently cut or heavily grazed grassland, the Burren, meadows, disused quarries in Galway, in the coniferous planting of the Ravens in Wexford, on sandy banks in Kilcoole, near the dunes by the sea in Wexford, along woodland paths in Glendalough, Ticknock, Glencree, Cloghleaigh Wood (Own records, 2015). *H. radicata* is a rosette forming, perennial. Seeds germinate in September and rosettes form. If open conditions are maintained in the habitat these will quickly gain dominance. Rosettes do not flower in their first year of growth, flowering inhibits the production of new leaves and the flowering rosette will die. A rosette can have many flowering stalks and produce 300-6000 seeds. Non-flowering/vegetative rosettes can produce side rosettes. The abundance of *H. radicata* depends on how the habitat is managed. In the Netherlands *H. radicata* was often the most abundant dicot on grasslands that were mown twice annually whereas unmown verges supported few individuals or none¹.

ORIGIN OF NAME

Hypochaeris radicata. The spelling *Hypochaeris* was used by Linnaeus in Species Plantarum, 1st edition, 1753. *Hypochaeris* in Genera Plantarum, 5th edition 1754. *Hypochaeris/Hypochaeris* were derived from Greek roots and mean “young pig”², another synonym was *Porcellites radicata* (L) Cass., *radicata* describes the marked or conspicuous roots.

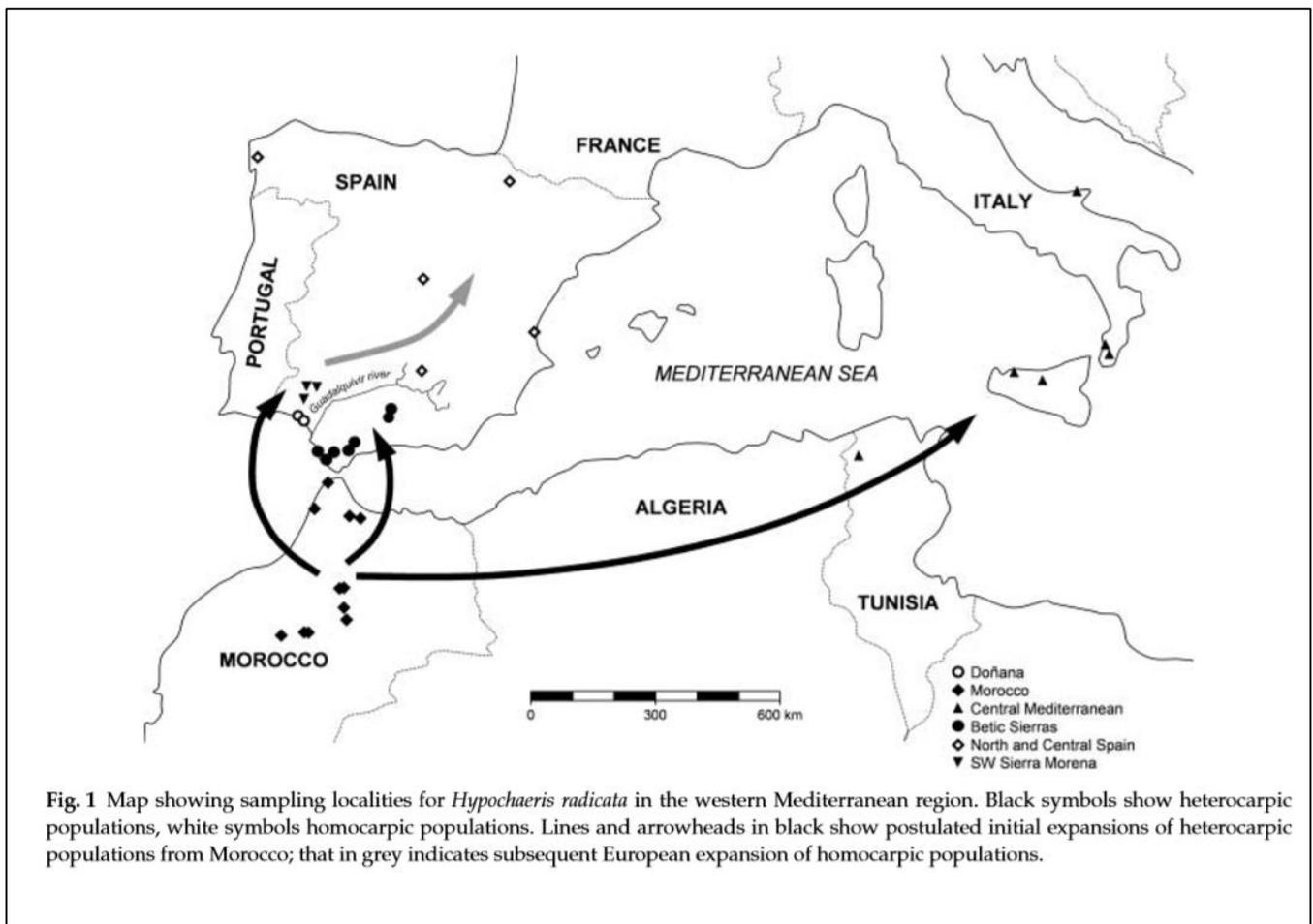


WORLDWIDE DISTRIBUTION

H. radicata is a very successful coloniser and has been described as a phenomenally successful worldwide invasive species. It is an invasive weed of Central and Northern Europe and is a common plant of temperate perennial pastures in southeastern Australia, and is widely distributed in New Zealand. It has been found in grasslands in all parts of temperate Japan where its distribution is expanding. Large populations have been recorded in South America³. Today there are abundant populations in the south of Brazil yet there were no records for *H. radicata* in the Flora Brasiliensis (Echler, 1884). In South Africa *H. radicata* is one of the most abundant and frequent alien plants around the Table Mountain National Park (*H. radicata*, *Rubus fruticosus* and *Taraxacum officinale* occupy the top 3 slots⁴). In recent times the spread of domesticated grazing animals from Europe to extensive grazing pastures in Australia and the Americas has favoured the exchange and establishment of weeds in areas not previously exposed to such grazing pressures.

ORIGINS

H. radicata was probably native to humid, evergreen woodlands of the Mediterranean region. Genetic analysis of *H. radicata* populations from Spain, Italy, Morocco, Europe, Asia and South America suggest a Moroccan area of origin and an expansion of the species during the Quaternary glacial periods. Islands that are now totally submerged, may have acted as stepping stones that permitted more than one expansion of *H. radicata* along several routes into the Iberian Peninsula and the central Mediterranean area³. The species evolved a tolerance for more open grassland habitats and, possibly assisted by human activity, colonised Central Europe, the Americas, Asia and Australia.



Proposed expansion routes of *H. radicata* from source in Morocco³.

The Asteraceae are represented in all alien floras and are the second most represented family after the Poaceae. Their high reproductive rates and specialised dispersal structures make them very efficient colonisers. The success of many invasive species is thought to involve a degree of self-compatibility or marked vegetative reproduction. *H. radicata* is self-incompatible and does not form a seed bank. Selfing produces very few seeds that are bigger and have a smaller pappus than seeds produced by outcrossing. These seeds disperse over shorter distances and have poor colonising ability. However seeds produced by outcrossing can disperse over several hundred metres. This maintains a good gene-flow and colonisation capacity.

Key for Hypochaeris (Taken from Sell & Murrell⁹, *H. maculata* has been omitted)

- 1 Leaves rarely with purple markings: flowers 4-27mm, deep yellow; pappus hairs in 2 rows, the outer row usually simple, the inner row plumose.

2

- 2 Capitula 5-15mm in diameter, opening in the morning and only in full sunlight and then not very widely; flowers 3-15(-21)mm

H. glabra

- 2 Capitula 20-50mm in diameter, opening only in the morning but widely; flowers 14-27mm.

3

- 3 Stems 30-60(-100)cm, usually more or less erect, leaves 8-25cm, often ascending; inner involucre bracts 16-25mm.

H. radicata* subsp *radicata

- 3 Stems (1-)7-30 cm, prostrate, decumbent or ascending; leaves 1-12cm, usually prostrate; inner involucre bracts 10-17mm.

H. radicata* subsp *ericetorum

Summary description of 2 subspecies

<i>H. radicata</i> subsp <i>radicata</i>	<i>H. radicata</i> subsp <i>ericetorum</i>
Taller	Shorter
Meadows, pastures, less-sandy locations	Shingle, dunes, sandy heaths
Less drought tolerant	More drought tolerant
Grows on relatively more N-rich soil	Grows on less N-rich soil

LEONTODON

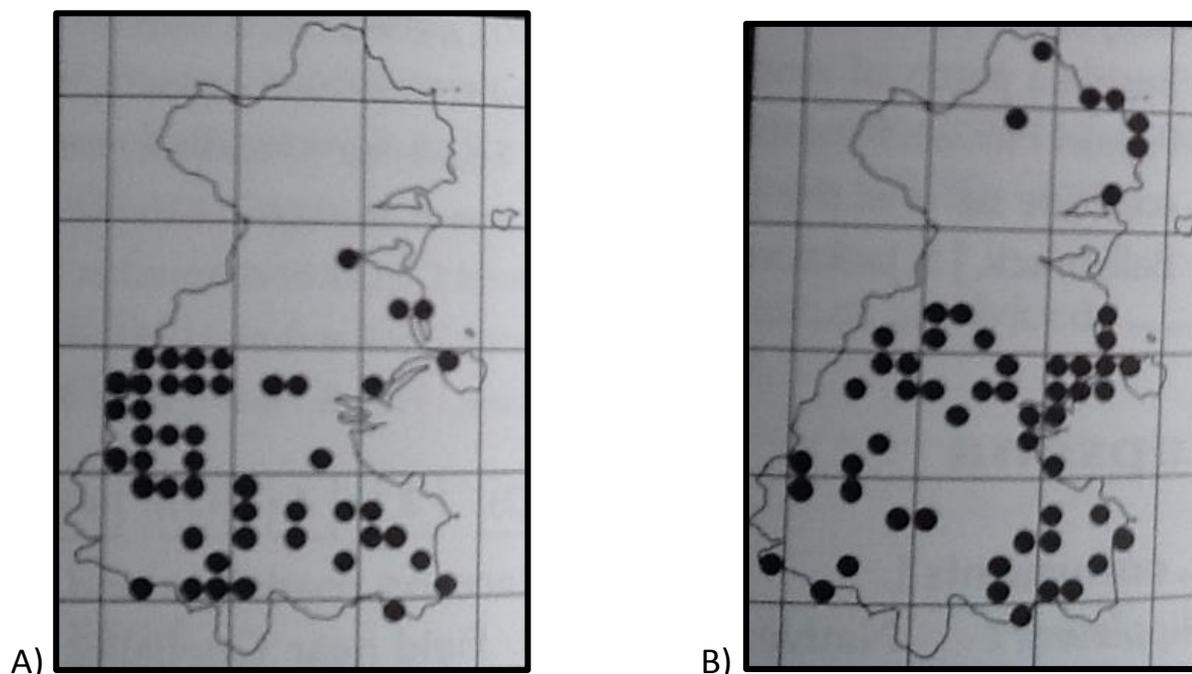
L. hispidus (Crág phortáin gharbh) and *L. saxatilis* (Crág phortáin bheag). Bright yellow florets, involucre of a single row of long, equal bracts and several small, outer ones. Achenes with a short beak or none.

FOOD & AGRICULTURE

L. hispidus leaves are reported to be edible if a bit bitter.

HABITAT AND SOME LOCATIONS IN IRELAND

L. hispidus occasional, dry pastures, banks and associated with calcareous grasslands and eskers. Most frequent in the centre, occasional in the south, mostly absent from the north. Between Keenan Bridge and Kirkpatrick Bridge on Royal Canal⁷. In calcareous grasslands below Bohernabreena⁷. *L. saxatilis* dry pastures, banks and sand dunes, frequent in south and centre, rarer in north. On fixed dunes in Bull Island.



A) *L. hispidus* and B) *L. saxatilis* records for County Dublin⁷.

KEY CHARACTERS

L. hispidus. Peduncles are very hairy, all achenes have a pappus of hairs.

L. saxatilis. Peduncles are sparsely hairy, outer achenes have a pappus of small scales, inner achenes have a pappus of feathery hairs.



Peripheral (left and middle) and central (right) achenes of *Leontodon saxatilis*¹⁰.



L. hispidus by canal bank in Rathangan, Hazel Doyle, 2015.

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