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# NEW IVIES FROM THE MEDITERRANEAN AREA AND MACARONESIA

*Alison Rutherford, Hugh A. McAllister  
and Robert R. Mill*

SINCE THE 1960s, IT HAS BEEN CLEAR that ivies (*Hedera* L.: Araliaceae) required some study. One of us (McAllister) undertook this work, by collecting living material of wild plants from the British Isles, Europe, North Africa and Macaronesia, as well as from parts of the Far East. As well as counting chromosomes and examining trichomes (hairs), McAllister studied the behaviour and performance of the different gatherings. Study of the species revealed that they fell into two well-defined groups: a northern group with large, white hairs and a southern and eastern group characterised by small, reddish hairs. The former group occurs north of the Mediterranean, while the latter is distributed mainly to the south, in Madeira, the Canaries, North Africa, southern Spain, Cyprus, the Caucasus, the Himalayas and eastwards to China, Korea and Japan. The first group has larger hairs with longer, white rays, giving the new shoots a felty appearance. It consists of *H. helix* L. subsp. *helix*, common ivy; *H. helix* L. subsp. *rhizomatifera* McAllister, rhizomatous ivy; *H. helix* forma *poetarum* (Nyman) McAllister & Rutherford, poets' ivy; *H. hibernica* (Kirchner) Bean, Atlantic ivy; and *H. azorica* Carrière, Azores ivy. All the other species belong to the much larger group of the reddish haired ivies. The trichomes of this second group are much smaller, with up to 18 adpressed rays, as opposed to the 3 to 8 rays of the northern ivies. The exact number of species and other taxa in this group is not known, as further collecting is needed of the hederas of the Far East. The known taxa, going from the southwest towards the east, are: *H. canariensis* Willdenow (Canaries); *H. maderensis* K. Koch ex Rutherford subsp. *maderensis* (Madeira); *H. maderensis* K. Koch ex Rutherford subsp. *iberica* McAllister (Iberia); *H. maroccana* McAllister (Morocco); *H. algeriensis* Hibberd (Algeria); *H. colchica* (K. Koch) K. Koch (Colchis and Iran); *H. cypria* McAllister (Cyprus); *H. pastuchovii* G. Woronow (Iran, Transcaucasia); and several taxa from the Himalayas, China, Korea, Japan and Taiwan, whose taxonomic status is in many cases in need of further study and which fall outside the scope of this paper. More detailed information on this classification can be found in earlier papers (McAllister 1979, McAllister 1982, McAllister & Rutherford 1983, Rutherford 1984).

The present paper is the first of two which will help to clear up various outstanding taxonomic and nomenclatural problems. It concentrates on the ivies of the circum-Mediterranean area and Macaronesia. Several of the names mentioned above have been current in ivy literature for some years, and descriptions of some of them have been given in English (e.g. Rutherford 1989); nevertheless, they have never been validly published under the rules of the *International Code of Botanical Nomenclature* (Greuter et al., 1988). In the present paper, these taxa are formally described and typified, so validating these names and allowing them to be used throughout the botanical community. Three new species and two new subspecies are described, and one new combination at the rank of forma is made. All the holotypes, except that of *H. maderensis* Rutherford which is at the Royal Botanic Garden Edinburgh (E), are deposited at the herbarium of Liverpool Museum (LIV); isotypes may be distributed to other herbaria in the near future. These LIV specimens are from material cultivated by McAllister at Liverpool University Botanic Garden; donations of plants from the same collections were made to other institutes and specimens (both living and herbarium) consequently already exist at E and K (Royal Botanic Gardens Kew). Herbarium specimens which have been made from these donations are here regarded as paratypes. Much fuller accounts of all the taxa will appear in a horticultural and taxonomic monograph of *Hedera* being prepared by Rutherford for publication probably in 1995, and in the account of *Hedera* currently in preparation by Rutherford and McAllister for the fifth volume of the *European Garden Flora*.

#### New taxa and combinations

*Hedera cypria* McAllister, *sp. nov.*

A *H. helix* L. subsp. *helix* trichomatibus parvis rubescentibus et foliis crassis planisque, surculis petiolisque juvenilibus atrorubineis differt. Folia juvenilia (status sterilis) atroviridia venis argenteomarginatis, ambitu triangulari usque obtuse trilobato; folia status sub-fertilis flavoviridia, multo longiora basibus cordatis et aliquando lobo singulo laterali.

Differing from *H. helix* L. subsp. *helix* in its small reddish scale hairs and its thick, flat foliage, dark ruby new growth and petioles, leaves at the juvenile (sterile) phase blackish green with silver borders to the veins; leaves triangular to bluntly 3-lobed at the sub-fertile phase yellow-green, much longer, with cordate bases and occasionally one lateral lobe.

Stems dark ruby red when young changing to greyish or pale brown when older; scale hairs with both rays and central part amber- or resin-coloured, 0.2 to 0.25 mm diameter, trichome rays 0.05 to 0.08 mm. Juvenile leaves 15 to 65 × 15 to 45 mm, triangular or oblong-hastate, usually with 3, very obtuse lobes, the apical lobe usually shallowly

1 cm



*Hedera cypria*. Top left, almost adult leaf; below, trichome (magnified). All drawings by Alison Rutherford

retuse with a short mucro; base cordate; petiole dark ruby red, 8 to 35 mm,  $\frac{1}{3}$  to  $\frac{3}{4}$  × lamina; petiolar scale hairs 0.2 to 0.4 mm diameter, up to 8-rayed, rays hyaline, central part reddish. Adult leaves 75 to 170 × 65 to 145 mm or larger, hastate or lanceolate with cuneate or truncate base, unlobed or with short basal lobes, sometimes with a single shorter lateral lobe immediately above these on the largest leaves.

*Type:* Specimen of material cultivated at University of Liverpool Botanic Gardens, Ness, Neston, Wirral, Cheshire, England, *H. McAllister* 188 (holotype LIV), originating from Cyprus: Kakopetria, Troödos Mountains, river terraces, 2200 ft., xii 1977, *Mrs Della* s.n. — 2n = 144. *Isotype* E. *Paratypes:* Cultivated at Liverpool Botanic Garden, iv 1990, *McAllister* s.n. (E); cultivated at Royal Botanic Gardens Kew, from same wild collection donated by H. McAllister, 23 vi 1987, voucher no. 458.81.06382 (K).

CYPRUS. Ayia River, Paphos Forest, on alders, common in that locality, covers whole trees, 14 x 1935, *A. Foggie* 373 (E); *ibid.*, 5 ii 1934, *A. Foggie* 319 (E); Troödos Mountains, rocks and streamsides, 1000 to 3500 m, raised from wild-gathered seeds *ca.* 1970, *H. McAllister* s.n. (E).

This species is related to *H. pastuchovii* G. Woronow (cf. *McAllister* 1982: 108, as '*Cyprus taxon aff. pastuchovii*'), but is much easier of cultivation and is a more attractive plant. The silver-bordered veins on a dark background and the ruby petioles make it very eye-catching. At the adult phase (represented at E by the two *Foggie* collections, of which 373 is in fruit), the leaves can reach 17 cm in length but it is still able to cling up to the semi-adult phase, and makes an unusual wall-covering, the masses of long yellow-green leaves hanging like tiles. It is endemic to the Troödos Mountains of Cyprus.

*Hedera helix* L. forma *poetarum* (Nyman) *McAllister & Rutherford*, *comb. et stat. nov.* Basionym: *Hedera helix* L. subsp. *poetarum* Nyman, *Consp. Fl. Eur.* 319 (1879).

*Syns:* *H. chrysocarpa* Walsh, *Trans. Hort. Soc. London* 6: 42 (1826); *H. poetarum* Bertol., *Prael. Rei Herb.* 78 (1827), nom. illegit., *H. helix* L. var. *poetica* Weston in *Univ. Bot. & Nurseryman* 1: 123 (1770).

Poets' ivy is a low-anthocyanin geographic variant of the common ivy. It is considered by some Russian authors to be native only to western Transcaucasia. It is found naturalised elsewhere, particularly in Italy. It has orange berries and bright green foliage. It is possibly less hardy than the typical form. *Pojarkova* (1951: pp. 224 and 253) treated it at species rank, as *H. chrysocarpa* Walsh, an appropriate epithet alluding to the colour of the berries.

*Hedera helix* L. subsp. *rhizomatifera* *McAllister*, *subsp. nov.*

*Syn.:* *H. helix* subsp. *rhizomatifera* *McAllister* in *Ivy Journal* 15 (1): 11 (1989), nom. inval. (sine descr. lat. vel indic. typ.)



*Hedera helix* subsp. *rhizomatifera*. Below left, young rhizomatous shoot; below right, trichome (mag.).

A *H. helice* subsp. *helice* caulibus subterraneis rhizomatiferis carnis geotropis, ad apices foliis minutis qui in plantas novas evolvunt ferentibus recedit. Folia status juvenilis perregularia parva argenteovenosa.

Differing from subsp. *helix* in its rhizomatous underground stems which are flesh-coloured or ivory white, geotropic and bear minute

leaves at their tips which mature into new plants. Leaves very regular, small and silver-veined, at the juvenile (sterile) phase.

Habit neat, somewhat prostrate; fleshy rhizomes emitting a few adventitious roots which at first are covered with dense short pubescence. Stems reddish tinged, with few or no scale hairs except near nodes where scale hairs are fairly numerous, 0.5 to 0.8 mm diameter, with 8 or 9 very unequal white rays more or less closely adpressed to stem. Petioles 20 to 70 mm, 1.5 to 2.5 × lamina, green but fairly heavily tinged red in lower part. Lamina of leaves 3-lobed, 10 to 25 × 15 to 35 mm, base cuneate or very broadly and shallowly cordate, apex of leading lobe subacute (occasionally abruptly but bluntly acuminate, or minutely retuse); base of lower lobes down-turned, margin puckered upwards slightly; veins on upper surface edged with dense white mealy granules which rub off yet leaving paler edging.

*Type:* Specimen of material cultivated at Liverpool University Botanic Garden, Ness, Neston, Wirral, Cheshire, England, 1975, *McAllister* 16 (holotype LIV), originating from Spain: prov. Huelva, Aracena area, April 1974, *N. & J. Rutherford* s.n.; material of this introduction also cultivated at Helensburgh (paratype E)— $2n = 48$ . Isotype E. [Some specimens of this collection have been distributed labelled incorrectly with the locality 'Odiel Bridge'; these include the E paratype].

The rhizomatous ivy is found in south and south eastern Spain; its distribution has not yet been accurately defined. It is a neat-leaved plant with small, uniform leaves with strong silver veining. It bears underground parts which produce minute plants at the stem ends. These dip down in winter and rise in summer; this could be a defence against cold, drought or even fire, should the upper parts be destroyed.

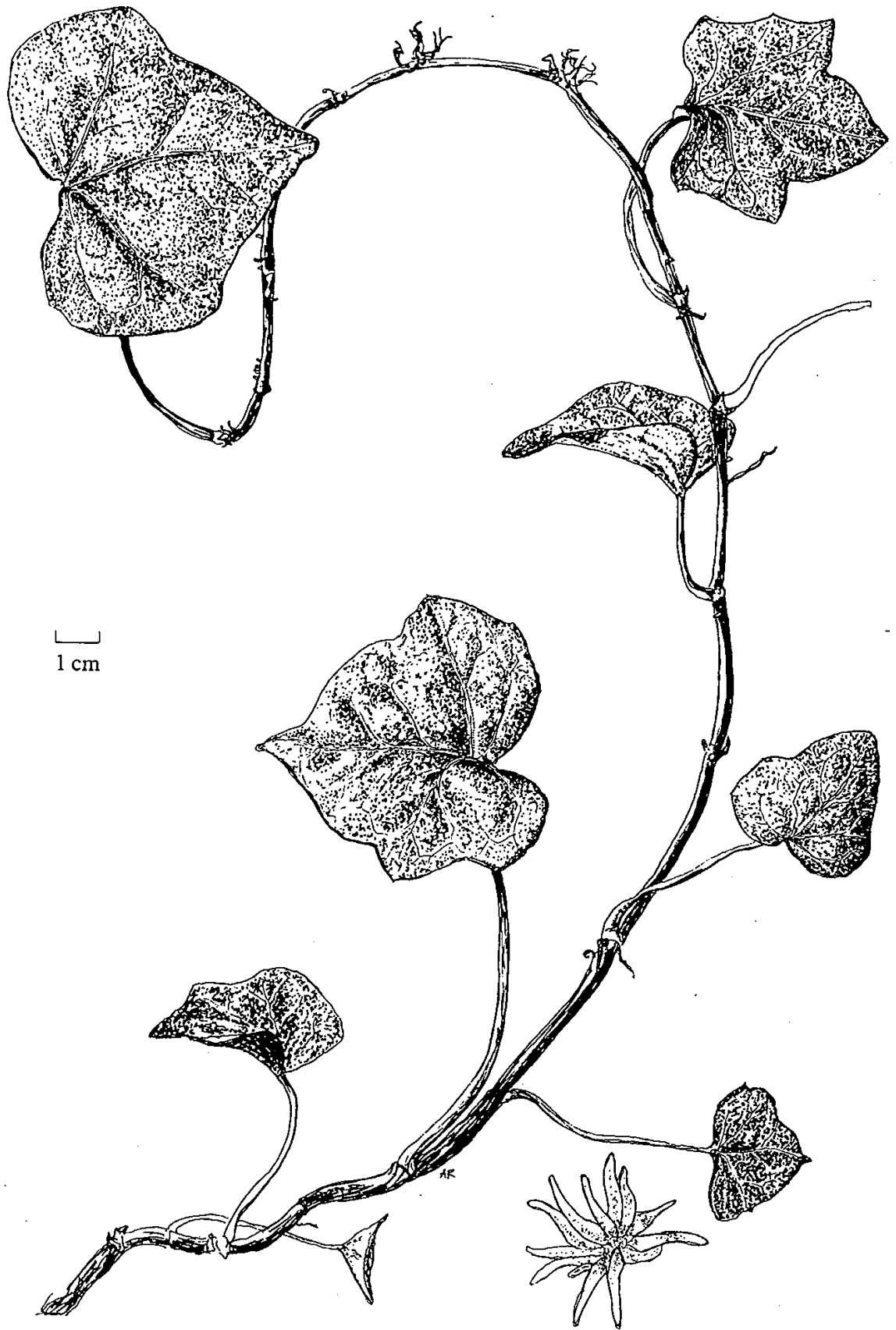
***Hedera maderensis*** K. Koch ex Rutherford, *sp. nov.* subsp. *maderensis*

*Syns:* *H. maderensis* K. Koch, *Dendrologie* 1: 680 (1869) pro syn., nomen nudum; *H. maderensis* hort. ex Dippel, *Handbuch der Laubholzkunde* 3: 241 (1893) pro syn. *H. helix* var. *canariensis*, nom. inval.

*H. helice* L. subsp. *helice* trichomatibus parvis rubescentibus, foliis latioribus mollioribus differt. Folia juvenilia (status sterilis) nitida atrosmaragdina lata, lobis usque quinque latis brevibus, magnitudine valde regularia, fortasse haud mutascentia; venae paginae superioris secus margines albidofarinosae.

Differing from *H. helix* L. subsp. *helix* in its small reddish scale hairs and broader, softer textured leaves. Leaves of the juvenile (sterile) phase glossy dark emerald green, broad, with up to 5 wide, short lobes, very regular in size and shape, possibly not phase-changing; veins on upper surface with distinct whitish mealy granules along their margins.

Stems green or greenish brown with little red or purple tinging except in youngest parts prominently striate; scale hairs 0.25 to 0.4 mm across with usually at least 13 short rays which are fused for much less



*Hedera maderensis* subsp. *maderensis*. Below right, trichome (mag.).



than half their length. Leaves leathery but softer than *H. helix*, 20 to 85 × 20 to 90 mm in wild plants, apex obtuse or occasionally slightly retuse, base truncate or cordate; upper surface with very sparse reddish brown protuberances which resemble contorted millipedes or bent rusty screws; lower surface with dense, minute papillae and sparse scale hairs resembling those on stem; veins with sparse, discrete, well separated white mealy granules on their surface and immediately alongside, on upper surface of lamina; petiole 20 to 100 mm, 0.5 to 1.18 × lamina, with a few scale hairs.

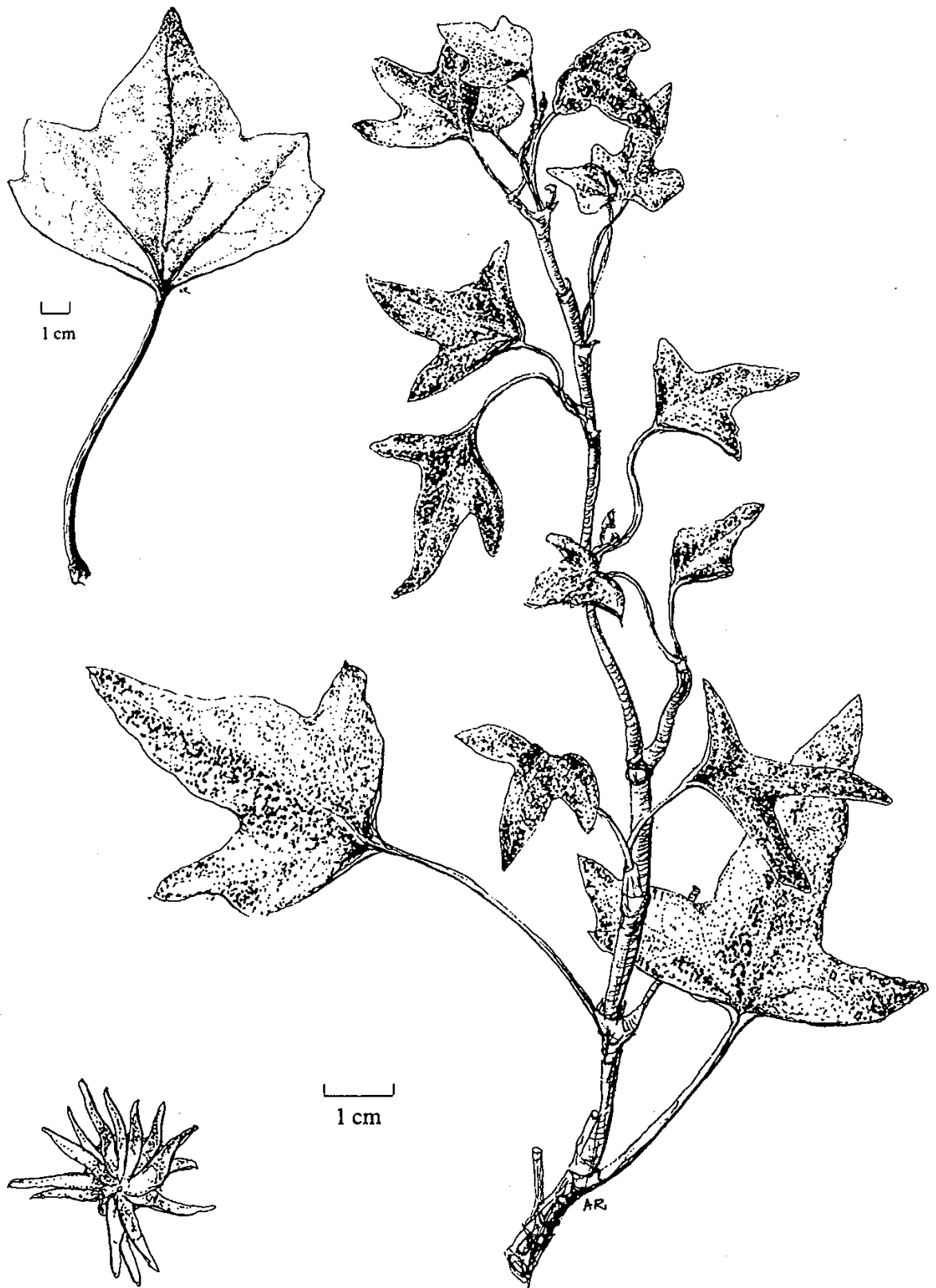
*Type:* Specimen of material cultivated at Liverpool University Botanic Garden, Ness, Neston, Wirral, Cheshire, England, 22 ix 1977, *McAllister* 18, (holotype E) originating from Madeira [near Funchal], 1975, by *D. McClintock* s.n.— $2n = 144$ . Isotype LIV. *Paratypes:* MADEIRA. Near Funchal, vii 1974, 'this ivy has been lost to cultivation for perhaps 100 years; when planted out the foliage becomes very large', *D. McClintock* s.n.—cultivated at Ness Gardens and Helensburgh (E, fragment of Helensburgh-cultivated plant); material from same *McClintock* collection cultivated at Kew (voucher no. 458.81.06299 of 21 v 1987, K).

Wild collections: MADEIRA. Below Poiso, above Funchal, 800 to 900 m, climbing tree trunks, 9 ix 1984, *Davis* 70379 (E); Hermigua el Monte, 18 iv 1861, *R. T. Lowe* 141G (K); W brink of Rib. de S. Jorge, on trees and stumps, 15 ii 1865, *R. T. Lowe* 984 (K).

The existence of this ivy was not accepted until some new collections were brought from Madeira in the 1970s and 1980s. Lowe had collected it in the 1860s but his specimens at K, filed under *canariensis*, went unrecognised. The plant has usually been cited in the ivy literature as "*H. maderensis* K. Koch" (cf. *McAllister* 1982, *Rutherford* 1984). However, K. Koch dismissed it as being what students called the Madeira ivy, but he did so in such a way that it is clear he did not believe there was a species endemic to the Madeiran archipelago. Although the name *H. maderensis* appears in his *Dendrologie* (1869), it is not there validly published and he cited no specimens; the name is here validated for the first time. *Hedera maderensis* is not yet in commerce, and many gardeners suppose that its name is merely a synonym for the Algerian ivy, *H. algeriensis* Hibberd. At Ness it has made an excellent ground-cover plant, and looks like a miniature, more yellow-green garden Irish ivy. It also thrives at the Royal Botanic Garden Edinburgh, to which living material was introduced from Madeira by the late Prof. Peter Davis and Mr Stuart McPherson in 1984.

It is possible that *H. maderensis* hort. ex Dippel may not refer to the same plant as described here, but the name is in any case invalid.

Some plants from Spain resemble *H. maderensis* but are sufficiently distinct to warrant their recognition as a separate subspecies. This is described below as *H. maderensis* subsp. *iberica*.



*Hedera maderensis* subsp. *iberica*. Top left, one of the broad-leaved forms; below left, trichome (mag.).

*Hedera maderensis* K. Koch ex Rutherford subsp. *iberica* McAllister, subsp. nov.

Syn.: *H. maderensis* K. Koch subsp. *iberica* McAllister in Rutherford, *Ivy Journal* 15 (1): 11 (1989) nomen et comb. inval., sine descr. lat. vel indic. typ.

A *H. helice* subsp. *helice* trichomatibus parvis rubescentibus et foliis status sterilis pallidius viridibus distinguitur. Folia status sterilis variabilia, trilobata, basibus cuneatis usque truncatis, venis haud prominentibus, versus staturam fertilem magis ordinatim obtuse quinquelobata existentia. A *H. maderensi* subsp. *maderensi* trichomatibus radiis paucioribus (7-12, non plus quam 13), venisque pagina superiore laminae  $\neq$  omnino efarinosis (non clare albidofarinosis) recedit.

Differing from *H. helix* L. subsp. *helix* in its small reddish scale hairs and at the juvenile (sterile) phase by the 3-lobed leaves with cuneate to truncate bases; veins not prominent; lamina becoming more regularly bluntly 5-lobed towards the fertile phase. Separated from *H. maderensis* subsp. *maderensis* by the scale hairs with usually fewer rays (7 to 12), and by the complete or almost complete absence of white mealy granules by the veins on the upper surface of the leaves.

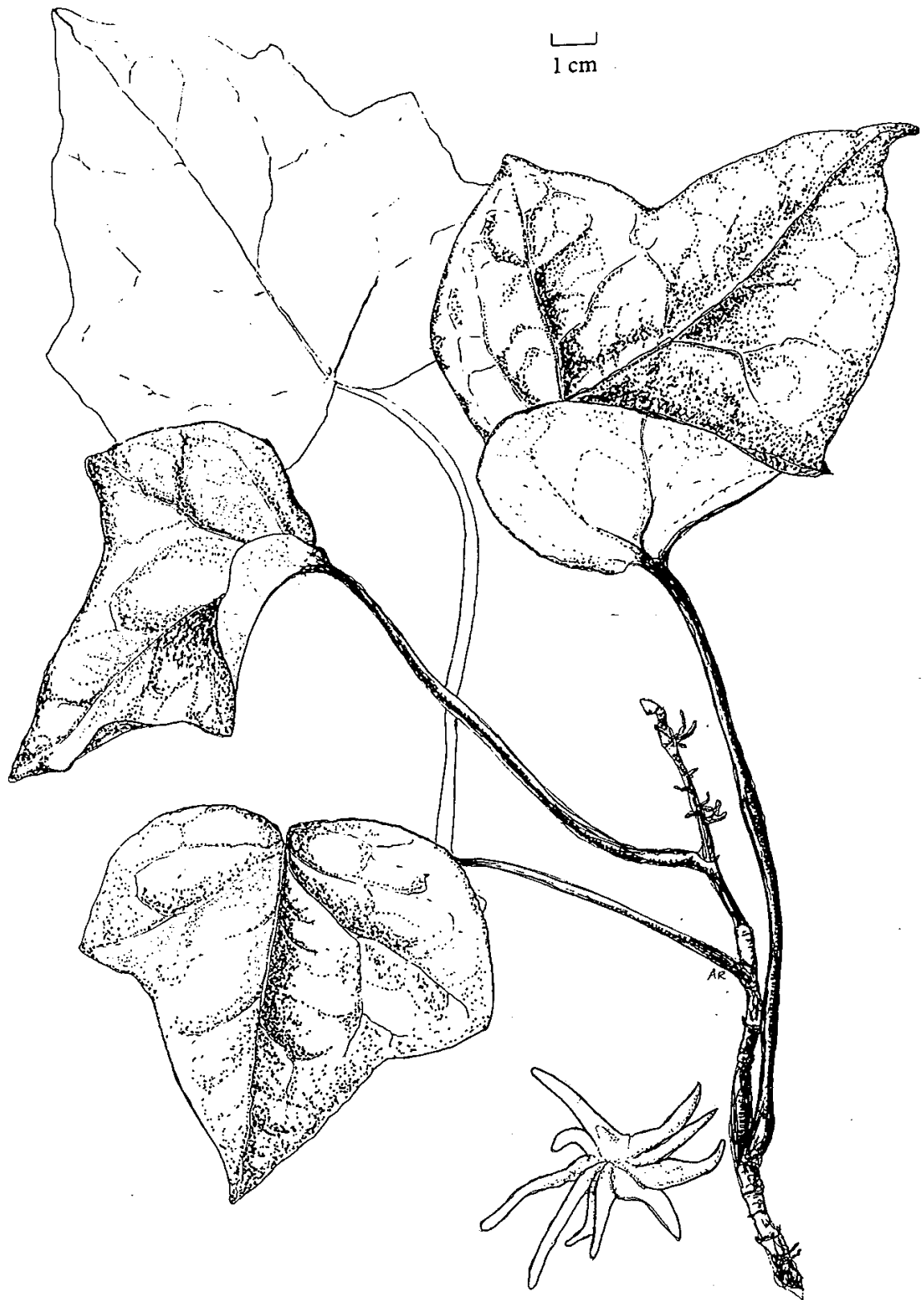
Stems greenish with almost no red tinging except when very young; scale hairs 0.2 to 0.5 mm across, with usually 7 to 12 rays (sometimes more) which are fused for much less than half their length. Leaves softer in texture than subsp. *maderensis*, basically 3-lobed, (15 to) 130 to 100  $\times$  (15 to) 30 to 135 mm, often broader than long, apical lobe distinctly longer than laterals, apex of apical lobe acute or obtuse, of laterals acute to rounded, base cuneate, truncate or shallowly and broadly, obtusely, cordate; both surfaces with numerous scale hairs when very young, upper surface becoming almost glabrous, lower developing dense, minute papillae with some scale hairs remaining; veins on upper surface completely or almost completely lacking white mealy granules but edges of veins slightly paler because of paler epidermal cells; petiole 20 to 80 mm, 0.6 to 1.3  $\times$  lamina, with fairly numerous scale hairs.

Type: Specimen of cultivated material grown at University of Liverpool Botanic Gardens, Ness, Neston, Wirral, Cheshire, England, 1975, *McAllister* 15 (holotype LIV), originating from Spain: prov. Málaga, between Alcalá and Los Barrios, roadside bank, 25-200 m, 17 iv 1974, A. McG. *Stirling* s.n. —  $2n = 144$ . Isotype E. A fragment of a different cutting from this collection, cultivated at Helensburgh is preserved at E and may be regarded as a paratype.

SPAIN. Prov. Cádiz, Algeciras, Miel Valley, roadside, below 100 m, 11 iv 1974, A. McG. *Stirling* s.n. (E; cult. Helensburgh and Ness Gardens)—introduced as *H. maderensis* subsp. *iberica* 'Miel Valley'.

PORTUGAL. Sintra, near Lisbon (Rutherford 1989: p.13—introduced as 'Sintra').

This subspecies of the Madeira ivy was discovered during the Carr expeditions to south Spain, in 1974. Like many relict plants, each



*Hedera maroccana*. Top left, more adult leaf; below right, trichome (mag.).

colony differs (the Miel Valley collection being very distinct from the type material when young), but as the plants mature they become more like the Madeiran. It seems perfectly hardy grown outdoors at Ness and in central west Scotland, and also at Edinburgh Botanic Garden.

*Hedera maroccana* McAllister, *sp. nov.*

*Syn:* *H. marrocana* [sic] McAllister in Rutherford, *Ivy Journal* 15(1): 13 (1989), nomen nudum.

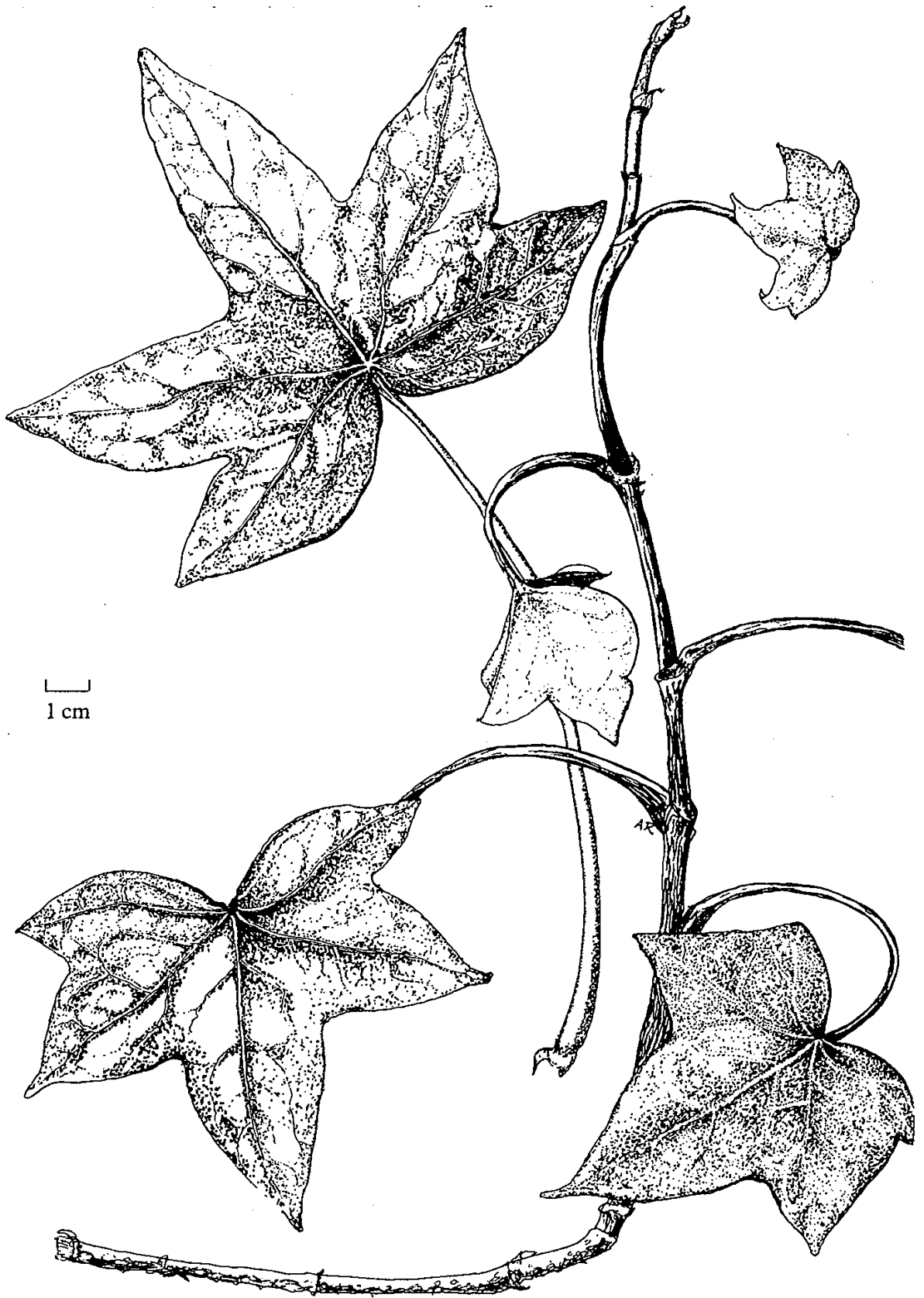
A *H. helice* subsp. *helice* trichomatibus parvis rubescentibus, foliis multo majoribus robustioribusque et partibus plantae omnibus majoribus distinguitur. Folia juvenilia (status sterilis) nitida smaragdina usque atroviridia, plerumque quinquelobata, basibus cordatis; venae in paginis elevatae, rubineae usque rubescenti-aeneae. Petioli robusti aeneo-marronini usque ad rubinei 3-11 cm longi. Planta pervalida.

Differing from *H. helix* L. subsp. *helix* in its reddish scale hairs and much larger, more robust foliage, and in being larger in all its parts. Leaves of the juvenile (sterile) phase glossy emerald to dark green, mostly 5-lobed, bases cordate, veins raised on the surface. Petioles long, robust, ruby to reddish bronze. Plant very vigorous.

Stems dark red when young, changing to cinnamon or pale greenish brown when older, nearly glabrous; scale hairs with 4 to 9 rays; rays 0.05 to 0.15 mm, hyaline, central part reddish. Leaves (3-)5-lobed, 25 to 90 × 20 to 100 mm, apical lobe obtuse to subacute, other ones similar but basal ones sometimes indistinct; base cordate on juvenile leaves, subtruncate on older ones, cuneate on adult ones; petioles of juvenile leaves 20 to 130 mm, 0.8 to 1.3 × lamina; petiolar scale hairs sparse, similar to stem scale hairs. Juvenile leaves with upper surface of two distinct textures: matt, with dense minute papillae and a few red scale hairs; and glossy, with a few simple hairs and apparently no red scale hairs.

*Type:* Specimen collected in June 1978 from material cultivated at University of Liverpool Botanic Gardens, Ness, Neston, Wirral, Cheshire, *McAllister* 86 (holotype LIV), originating from Morocco: Middle Atlas Mts., roadside between Ifrane and Ketama, 35 km from Ketama, near small waterfall, 24 iii 1974, *International Dendrology Expedition* s.n. (paratypes E—material cultivated at Helensburgh from same wild collection (but dated '20 iii 1974), presumably incorrectly, and with an altitude cited of 1700 to 2300 m), and K—material cultivated at Royal Botanic Gardens Kew from same wild collection, accession donated by H. McAllister: voucher no. 458.81.06300 of 23 vi 1987). — 2n = 48. Isotype E.

MOROCCO. 7 km from Asni on road to Imlil, 1325 m, 31°11'N 7°58'W, on calcareous cliffs, 19 vii 1989, *M. Ait Lafkih, S.L. Jury, J.B. Peris & G. Stübing* 698 (E); 12 km from Taza along minor road to Gouffre de Friouato and Bab-Bou-Idir, 1380 m, 34°8'N 4°2'W, growing over north-facing limestone cliffs, 9 vii 1989, *S.L. Jury, J.B.*



*Hedera maroccana* 'Spanish Canary'

*Peris & G.B. Stübing* 83 (E); near Imlil, Djebel Toubkal Massif, by stream, 2100 m, viii-ix 1970, *Clayton & Brinklow* 107 (E).

SPAIN. Prov. Granada, Lanjarón, 1000 to 1200 m, roadside, ... frequently grown in house and garden from Madrid southwards, 1974, *A. McG. Stirling* s.n. (E)—as 'Spanish Canary'.

This species has two forms, 'Morocco' with large, short, wide lobes and bronze-tinged petioles and new bark, and 'Spanish Canary', a magnificent glossy emerald green-leaved giant, commonly seen in Andalucian gardens (cf. Lanjarón collection cited). It has become naturalised in a few places in southern Spain, Gran Canaria and Tenerife. The Latin description applies to the typical, Moroccan, form of the species.

### Acknowledgements

Some of the living material used to prepare the drawings was kindly supplied by the Royal Botanic Garden Edinburgh, Ness Gardens and Fibrex Nurseries.

### References

- GREUTER, W., ET AL. (eds.) 1988. *International Code of Botanical Nomenclature adopted by the Fourteenth International Botanical Congress. Berlin, July-August 1987*. Regnum Vegetabile vol. 118. Königstein.
- McALLISTER, H. 1979. The species of ivy. *Ivy Exchange Newsletter*, No 1, part 4.
- McALLISTER, H. 1982. New work on ivies. *International Dendrological Society Year Book 1981*, pp.107-108.
- McALLISTER H. & RUTHERFORD, A. 1983. The Species of Ivy. *Ivy Journal* Vol. 9(4), pp.45-54.
- POJARKOVA, A. 1951. Species chinensis generis Hedera L. et earum affinitas. *Notulae Systematicae (Leningrad)*, Vol 14, pp.244-264.
- RUTHERFORD, A. 1984. The history of the Canary Islands ivies and its relatives. *Ivy Journal* Vol. 10(4), pp.13-18.
- RUTHERFORD, A. 1989. The Ivies of Andalusia (Southern Spain). *Ivy Journal* Vol. 15(1), pp. 7-17.

*Editorial note:* The above article has been accepted for publication in the knowledge that not all of its proposals may be accepted by other students of *Hedera*. Nevertheless, it is felt that, in the interests of science, there should be informed discussion on the status of taxa within the genus.