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"Key to Land Shells of Great Britain"

by

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Introduction.

This Key is entirely artificial, taking no account of natural affinities or scientific classification, and is intended merely as a rough guide to beginners. The best aid to identification is good illustrations. Experience is needed to distinguish some species with assurance, while for some, e.g. Succinea and Vitina, examination of internal structures, such as the jaw or genitalia, is really necessary, and requires some skill in dissection. This Key deals with normal adult shells, not with juvenile or abnormal forms. Dimensions in millimetres are of the height (length) or width, whichever is the greater, and refer to specimens of normal size. Living shells should be collected, as colour and texture deteriorate in dead shells exposed to weathering; furthermore, it is only by studying living snails that a knowledge of their habitat can be acquired: for instance, in flood refuse land and freshwater species from a variety of habitats are indiscriminately mixed together (though sifting such deposits is a good method for collecting some minute shells).

This Key is limited to land snails. Slugs are dealt with by H.E. Quick, 1949, Linnean Society Synopses of the British Fauna, No. 8, price 7/6 (obtainable from the General Secretary, Linnean Society, Burlington House, Piccadilly, London, W.1); freshwater snails by T.T. Macan & R.D. Cooper, 1960, "Key to the British fresh- and brackish-water Gastropods", 2nd edition, Freshwater Biological Association Scientific Publication No. 13, price 3/- (obtainable from the Librarian, F.B.A., Far Sawrey, Ambleside, Westmorland); and the freshwater bivalves by A.E. Ellis, Linn. Soc. Synopses No. 13, price 20/-. The Field Studies Council has published a "Key to the land snails of the Platford area, Suffolk", by J.E. Morton & J. Machin, 1959, reprinted from Field Studies, vol. 1, No. 1. All these are illustrate

SOME PRELIMINARY SORTING.

Habitats.

Though few species are rigidly confined to one type of habitat or environment, certain kinds are more likely to be found in particular habitats, such as woods, marshes, downs, etc., than elsewhere. Species may be encountered in unusual places where they would not be expected.

Wet places, marshes, fens, river banks, lake shores, etc.
Succineidae, Vertigo antivertigo, V. moulinsiana, V. lillieborgi, V. angustior, Zonitoides nitidus; many other species occur in wet places but are not restricted to them.

Woodland (especially old natural woods), old hedges, etc.
Acicula, Azece, Acanthinula, Ena, Marpessa, Clausilia rolphi, Helicigona, Helicodonta, Vitрина major, Zonitoides excavatus (on non-calcareous soils); many other species live in woods but also elsewhere.

Open grassy places, downs, sand dunes, fields, etc. (not woods).
Truncatellina, Abida (sometimes in woods), Vallonia, Theba, Hygromia subvirescens, Helicella, Cochlicella, Monacha cartusiana, M. cantiana.

Rocks and walls.
Pyramidula, Vertigo pusilla, V. alpestris, Balea (also trees), Clausilia dubia, Helicigona.

Sea coast or near the sea (mainly south and west coasts).
Theba, Cochlicella, Hygromia subvirescens, Catinella, Truncatellina britannica.

Gardens.
Helix aspersa, Hygromia striolata, Oxychilus draparnaldi; more rarely some other species.

Subterranean.
Cecilioides; some other snails bury themselves in cold or dry weather.

Distribution.

Most species are fairly widely distributed, but others are restricted to a few localities or to certain regions; they may be rare everywhere or locally common. The following are rare or local: Catinella, Succinea oblonga, Truncatellina, Vertigo pusilla, V. moulinsiana, V. lillieborgi, V. alpestris, V. angustior, Ena montana, Laciniaria, Fruticicola, Helicodonta, Theba, Hygromia limbata, H. cinctella, H. subvirescens, Monacha cartusiana, Helicella elegans, Vitрина major.

Size.

Largest (35-45mm.): Helix pomatia, H. aspersa.

Large (15+mm.): Helix hortensis, H. nemoralis, Arianta, Helicigona, Monscha cantiana, Fruticicola, large Helicella virgata, H. itala, Laciniaria, Marpessa, Succinea putris.

Small (3-5mm.): Pupilla, Lauria, Cacilioides, Retinella radiatula, R. pura, Vitrea, Euconulus.

Minute (3mm. or less): Acicula, Carychium, Vertigo, Truncatellina, Columella, Pyramidula, Vallonia, Acanthinula, Punctum.

The rest, of moderate size, measure between 5 and 15mm. Though a few species vary widely in size, most do not depart much from the normal.

KEYS TO THE SPECIES.

Operculate. -- mouth of the shell closed when the animal is retracted by a flat, round lid or operculum which is attached to the back of the animal behind the shell; two species only:-

Acicula fusca: less than 3mm., cylindrical, highly polished, operculum thin, horny.

Pomatias elegans: about 15mm., conical, whorls very rounded, spirally ridged, operculum thick, shelly; on chalk and limestone.

Sinistral. -- whorls coiled anticlockwise, so that when the shell is held spire upwards with the mouth towards the observer it is on the left (sinistral abnormalities of dextral species are sometimes found).

Minute (about 2mm.): Vertigo angustior, with 5 "teeth" inside the narrow mouth; marshes, rare; V. pusilla, with 6 apertural teeth; rocks and walls, local.

Larger (8+mm.): Clausiliidae.

Mouth simple, usually with a single tooth, no clausilium, shell widest at base, 8-9mm.; walls, rocks and trees. -- Balea perversa.

Mouth with internal folds or ridges; clausilium (spoon-shaped structure for closing the shell) present; shell widest at or below middle, 12-18mm.

Smooth, glossy, 18mm.; mainly woodland. -- Marpessa laminata.

Strongly striated, umbilicus wide, 17mm.; very local. -- Laciniaria biplicata.

Less strongly striated, umbilicus narrow, 12-16mm.: Clausilia (3 species). -- C. bidentata, smallest and commonest species; shell narrow, with white flecks or streaks. C. dubia, 16mm., more swollen, unicolorous, smoother; rocks and walls in limestone districts of N.England. C. rolphi, very swollen, reddish brown, mouth wide; woods and hedges in central and S.England.

All the rest of our species are dextral (coiled in a clockwise direction).

Apertural Teeth Present. -- inside of mouth of shell furnished with one or more "teeth," denticles or knobs.

One tooth: Pupilla muscorum (rarely 0, 2 or 3 teeth): 3-3.5mm., cylindrical, mouth narrow with white external rib behind the rim.

Lauria cylindracea: 4mm., lip broad, turned outwards or reflected, no external rib, glossy, less cylindrical; common.

Two teeth: Helicodonta obvoluta, quite unique in shape, like a flattened cheese, spire sunk below the level of the body-whorl, hairy, lip prominently thickened, width of shell 12mm.; beech woods and old hedges in W.Sussex and S.Hampshire.

Three teeth: Carychium, 2mm., shaped like a miniature whelk, white or colourless; two closely related species: C. minimum, with 5 whorls, nearly smooth, damp habitats; C. tridentatum, 5½ whorls, finely striated, less swollen, drier places.

Azeca goodalli: 7mm., spindle shaped, very glossy, brown; resembles Cochlicopa

Truncatellina britannica: under 2mm., cylindrical, strongly striated, light brown (teeth not all visible from in front); dry places on south coast, rare.

Four teeth: Vertigo alpestris: 2mm., subcylindrical, pale brown, strongly striated; limestone rocks and walls, N.England, Dolgelly and Mull.

V. lilljeborgi: 2-2.5mm., resembles V. moulinsiana but is darker, less swollen, with narrower umbilicus and weaker lip; teeth sometimes 5; lake shores in English Lake District and Scotland.

Lauria anglica: less than 4mm., barrel shaped; frequent in north, rare in south.

Five teeth (sometimes four): Vertigo pygmaea: 2mm., the commonest Vertigo. V. moulinsiana: 2.3mm., the largest Vertigo, very swollen; fens and

marshes E. & S. England, very local.

Six teeth: Vertigo substriata: 2mm. or less, strongly striated, whorls very convex, suture deep, yellowish brown; sometimes with 4 or 5 teeth; rare in the south.

Six to eight teeth: Vertigo antivertigo: 2mm., dark brown; wet places.

Eight or nine teeth: Abida secale: 7mm., whorls 8, strongly striated; dry places on limestone or chalk, England only.

SHELL CLOTHED WITH HAIRS OR SPINES.

Spiny: Acanthinula aculeata: 2mm.

Hairy: mouth with two blunt "teeth", shell cheese-shaped, 12mm. wide. --

Helicodonta obvoluta.

Mouth without teeth, umbilicus fairly wide. -- Hygromia hispida (about 8mm.); in H. liberta, a doubtfully distinct species, the umbilicus is narrow. Umbilicus very narrow. -- Hygromia subvirescens: 6mm., green; near sea in S.W. Monacha granulata: rather fragile, pale straw colour, hairs straight (not curved as in Hygromia), not easily rubbed off.

(Young shells of Monacha cantiana and Hygromia striolata are hairy).

SHELL KEELED AT MARGIN (PERIPHERY).

Sharply keeled: Helicigona lapicida, very flattened, lens-shaped, brown, with conspicuous white lip, umbilicus wide; shell 17mm. wide, shape quite unique; woods, rocks and walls on chalk or limestone

Helicella elegans: conical, top-shaped, flat below, chalky white or grey, often banded, umbilicus very small 7.5mm.; shape like a Trochus; grassy places near Dover and Caterham.

Bluntly keeled or angled: Discus rotundatus: flat, strongly striated umbilicus very wide, width 7.5mm.; common.

Hygromia oinctella: globose, Helix-like, about 12mm., umbilicus almost closed; related to H. limbata; Paignton, S.Devon.

SHELL VERY THIN, SEMI-TRANSPARENT.

Elongated, whorls increasing very rapidly, spire short, body-whorl capacious, mouth half or more the height of the shell, into which the animal can barely withdraw; wet places: Succineidae.

Shell under 10mm., thicker, whorls more rounded, mouth almost circular, body-whorl not so large in proportion as in the larger species, not unlike the freshwater Lymnaea truncatula. -- Catinella arenaria, known only from Braunton Burrows, N.Devon, and the rare Succinea oblonga are separable only by anatomy with certainty, but arenaria is toffee or amber coloured and the whorls more swollen, oblonga is horn-coloured or greenish.

Height 10-17mm. or more: three rather similar species. --
Succinea putris: 17+mm., whorls enlarging very rapidly so that the body-whorl and mouth are very large; less wet habitats than the next two.
S.pfeifferi: about 10mm., paler, thinner, whorls increasing less rapidly, spire relatively higher, mouth smaller, slanting or oblique; common.
S.elegans: about 15mm., more slender and elongate, not so thin, deep amber, more strongly striated, spire more produced, mouth sharply angled above, not oblique; S.E. England.

Flattened or depressed.

Umbilicus narrow, shell greenish white, closely coiled, about 3mm.:
Vitrea - two closely related species, V.crystallina and V.contracta, the latter smaller, with wider and deeper umbilicus and narrower mouth, inhabiting drier places.

Umbilicus wide: most Zonitidae. -

Umbilicus very wide and open: Zonitoides. - two species, Z.exoavata 6-7mm., pale brown or greenish white; woods and hedges on acid soils; Z.nitidus, 8mm., deep brown, glossy, umbilicus not so open; wet places.

Umbilicus moderately wide: Retinella and Oxychilus. -

Small, width 4mm.: Retinella radiatula, brownish, glossy, strongly and regularly striated; R.pura, white or pale brown, dull, smooth.

Larger, 6.5-15mm. Dull, waxy, brown above, white below, umbilicus wide, width about 8mm: Retinella nitidula.

Glossy: four species of Oxychilus, in order of increasing size. --

O.alliarius, up to 6.5mm., smells strongly of garlic; O.helveticus, up to 10mm., very glossy, deeper brown, umbilicus narrower, spire more raised, animal with a black collar showing through the shell; O.cellarius,

about the same size or slightly larger, pale straw-colour, whitish underneath, more flattened, suture appears channelled; O. dreparnaldi, up to 15mm., rather thick shelled, deep fawn, striation coarser, spire much depressed, mouth oblique.

Globose, very fragile.

Spire slightly produced, colour light brown, umbilicus very narrow, width about 9mm.; woods and wild places, rare in S. & S.E. -- Hygromia subrufescens.

Spire flattened, shell glassy, greenish, whorls enlarging very rapidly, no umbilicus; animal incapable of withdrawing completely within the shell: Vitrina, two species. -- V. pellucida, adult in winter, common, and V. major, adult in spring, rare and local, distinguished anatomically, but in major the shell is yellowish green and even more fragile, the mouth larger and the spire flatter.

SHAPE OF SHELL.

Conical or top-shaped: 3 minute species. --

Euconulus fulvus, up to 3.5mm., brown, very glossy, thin, base convex, no umbilicus. Pyramidula rupestris, 3mm., depressed, dark brown, striated, whorls rounded, umbilicus wide and deep; on limestone rocks and walls, usually fully exposed. Acanthinula lamellata, 2+mm., more globose, yellowish brown, umbilicus narrow, strongly and regularly striated or ribbed; woods, rare in south.

Elongated, height much greater than width:

Small (up to 5mm.): Columella edentula, 3mm., cylindrical, rather like a small Pupilla but without apertural tooth or rib. Truncatellina, less than 2mm., cylindrical, strongly and regularly striated: 2 species or subspecies. -- T. cylindrica, without teeth, E. England and E. Scotland, very local; T. britannica, 3 teeth (not all easily visible), south coast, Devon to Isle of Wight.

Cecilioides acicula, 5mm., very slender, tapering at both ends, white or colourless, fragile; subterranean, often cast up in mole-hills and ant-heaps.

Size medium, up to 15mm.

Cochlicopa, up to 7mm, very glossy and slippery, no umbilicus, lip with an internal rib: two closely related species. -- C. lubrica, larger and stouter than C. lubricella, which inhabits drier places.

Ena: oval conical, not polished, lip broad and turned outwards

like the rim of a pie-dish, umbilicus a chink; two species. -- E.montana, 15mm., old woods on chalk or limestone, S.England, rare; E.obscura, 9mm., more cylindrical, often soil-encrusted, common.

Large, 15+mm: Cochlicella acuta, elongate conical, white, variously striped or variegated with brown, shaped rather like the marine Turritella; S. & W. coasts, sometimes in great profusion.

FLATTENED, width much greater than height.

Lip thickened and trumpet-like, mouth circular, umbilicus wide, shell whitish, up to 2.5mm.: Vallonia, 3 species. -- V.costata, strongly ribbed; V.pulchella and V.excentrica, smooth, the latter smaller, less circular in outline, lip not abruptly turned outwards as in pulchella but expanding smoothly out of the body-whorl; occurs in drier habitats.

Lip not thickened: Punctum pygmaeum, 1.5mm. or less, light brown; the smallest British land snail.

Helicella itala, moderately large (av.17mm.), white opaque, variously banded or variegated with brown.

GLOBOSE - more or less typical "snail-shaped" or Helix-like. Species roughly in decreasing order of size:

Helix pomatia, about 45mm., the largest British land snail, thick and solid, light brown, indistinctly banded, spire somewhat raised, umbilicus narrow; S.England, on chalk or limestone, local.

H.aspersa, 35mm., spire depressed, shell variously mottled or banded, lip white, turned outwards, no umbilicus; the common garden snail.

H.nemorialis, about 22mm., usually some shade of yellow, red or brown, plain or with 1 to 5 brown bands, lip usually brown, no umbilicus; colour and banding very variable; "love-dart" (a dagger-shaped secretion of the genital organs) straight with 4 simple blades (as in H.aspersa).

H.hortensis, slightly smaller, coloration similar but less variable, plain or 5-banded shells predominating, lip white; dart curved with 4 forked blades, like a Maltese cross in section.

Arianta arbustorum, 20+mm., similar to H.nemorialis in shape, umbilicus not quite closed, lip thick, sharply turned outwards, white, shell brown (often yellow), flecked with yellow or white, often with one dark band.

Theba pisana, 16mm., chalky white, often tinged with pink, plain or with numerous narrow bands and delicate markings, very variable; lip not turned out, pink inside, umbilicus narrow; by the sea, S.Wales and Channel Islands, locally abundant.

Fruticicola fruticum: white, rather like M.cantiana but more globose and finely striated; anatomy very different; a few localities in Kent.

Monacha cantiana, about 19mm., white, usually tinged with red, often with pale marginal zone, without bands or other markings, shell rather thin, umbilicus narrow; Devon to Durham.

M.cartusiana, 12mm., thicker, white, lip with strong internal white rib, shell more compact and solid than cantiana; grassy places, S.E.England, local.

Hygromia limbata, 12mm., spire slightly depressed (but less so than striolata), margin faintly angled, umbilicus deep and narrow, lip turned outwards, shell reddish or pale brown with pale marginal zone; south of Teign estuary, S.Devon.

H.striolata, about 13mm., spire depressed or flattened, margin faintly angled, umbilicus wide, shell rather coarsely striated, varying from white to reddish brown; a smaller form with higher spire occurs in N. & W.; common, frequent in gardens.

H.hispida: when the hairs are rubbed off, as often happens, the shell resembles a dwarf striolata with more raised spire.

Helicella virgata, 8-25mm. (av.16mm.), chalky white, plain or variously banded or marked (a frequent variety is pale brown), spire rather raised, umbilicus deep, narrow; very variable.

H.caperata, 7-12mm. thick and chalky, strongly striated or wrinkled, umbilicus moderately wide, spire more depressed than virgata, lip with strong white internal rib; a common variety has a dark band.

H.rigarii: closely related to caperata but flatter, less coarsely striated, umbilicus wider, rib inside the lip weaker, banding when present narrow and less distinct.

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