

ILLUSTRATED INDEX
of BRITISH
FRESHWATER SHELLS.

ARTHUR G. STUBBS.

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ARTHUR G. STUBBS.

CONTAINING LIFE-LIKE AND AUTHENTIC FIGURES OF ALL THE BRITISH SPECIES OF FRESHWATER SHELLS, WITH DESCRIPTIONS OF THE CHIEF CHARACTERISTICS, COLOURING, HABITAT, AND RELATIVE SCARCITY OR ABUNDANCE OF EACH SPECIES, AND AN ENUMERATION AND DESCRIPTION OF THEIR VARIETIES.



TAYLOR BROTHERS,
SOVEREIGN STREET, LEEDS.
1907.



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593
moll.

INTRODUCTION.

THE author hopes that this index may prove a real help to the student of Conchology in identifying the British freshwater shells.

His idea is to present, at a moderate price, a plate of figures, carefully drawn from nature, that will expose the whole group at once, and thus allow a shell to be readily compared with the illustrations.

By means of a three-fold plate this has been accomplished, and by folding either of the side plates over the middle one the remaining exposed plate has the 'Key' to it opposite. The 'Key' to the middle plate is easily referred to by raising the left-hand plate.

The drawings are, for the most part, of natural size, but where the smaller species have been enlarged, a 'size-line' has been added.

In the descriptions of the plates, a colour-column is given, but it should be noted that it refers to the ground-colour of the cleaned shell, and not to the accidental covering of mud, of various hues, found on many shells. Moreover, as even the ground-colour varies in shells of the same species from different localities, too much reliance must not be placed on that alone.

In the adjoining column some of the main features that distinguish the species from others, somewhat similar, are pointed out.

With regard to 'habitat,' a great many of the species *may* be found wherever there is water, but they undoubtedly show a preference for still or running, shallow or deep, as the case may be. The usual 'habitat' is therefore given.

In the 'Frequency' column it may be as well to explain that 'local' means the species is confined to certain limited areas, though it may be abundant where it does occur. 'Frequent' means that the species is not common, but may turn up anywhere, and is pretty well distributed over the country.

With the exception of some of the chief forms of the variable *Limnæa peregra*, varieties have not been figured, but a descriptive list of them, together with monstrosities, will be found at the end of the book. They have been taken for the most part from Mr. L. E. Adams' "Manual of British Land and Freshwater Shells," to which delightful little book the reader is referred for hints on collecting, cleaning, mounting, and arranging in cabinets these most interesting objects of natural history.

PLATE II.—(UNIVALVES).

| Fig. | Species & Authority | Colouring. | Chief Characteristics. | Habitat | Frequency |
|------|--|----------------------------|--|--|-----------|
| 17 | <i>Amphipeplea glutinosa</i> (Brug.). | Pale horn colour | Extreme thinness, glossiness, mantle covers young shells | Lakes and ponds | Local |
| 18 | <i>Limnæa involuta</i> (Thompson) | Pale amber ... | Intorted spire. Only one habitat known | Lake on Cromaglaun Mountain near Killarney | Very rare |
| 19 | — <i>truncatula</i> (Müller) | Greyish horn color | Small size, turreted spire | Shallow water, on mud | Common |
| 20 | — <i>glabra</i> (Müller) | Ditto | Long tapering spire, glossiness | Ditches and ponds | Local |
| 21 | <i>Physa fontinalis</i> (Linné) | Horn colour ... | Sinistral, short blunt spire | Streams, canals, etc. | Common |
| 22 | <i>Aplexa hypnorum</i> (Linné) | Dark reddish horn colour | Sinistral, spindle shape | Ditches, streams, etc. | Local |
| 23 | <i>Physa heterostropha</i> (Say) | Reddish horn colour | Globoseness, sinistral (introduced) | Canals and reservoirs | Rare |
| 24 | — <i>acuta</i> (Drap.). | Pale horn colour | Pointed spire, sinistral (introduced) | Water tanks, Kew, etc. | Rare |
| 25 | <i>Ancylus fluviatilis</i> (Müller) | Yellowish grey | Limpet shape | Running water on stones | Common |
| 26 | <i>Velletia lacustris</i> (Linné) | Greyish horn colour | Long shape, twisted apex | Ditches, marshes, on water plants | Frequent |
| 27 | <i>Neritina fluviatilis</i> (Linné) | Mottled, often banded | Solidity, orange colored hinged operculum | Running or still water, on stones | Frequent |
| 28 | <i>Paludestrina similis</i> (Draparnaud) | Horn colour .. | Operculum. Short spire, swollen whorls | Thames marshes near Woolwich | Very rare |
| 29 | — <i>ventrosa</i> (Montagu) | Pale horn colour | Operculum. Long tapering spire | Brackish marshes | Local |
| 30 | — <i>taylori</i> (Smith) | Yellowish horn colour | Operculum. Blunt spire, rounded whorls | Canals and marshy lands | Rare |
| 31 | — <i>jenkinsi</i> (Smith) | Pale horn colour | Operculum. Tapering spire, often keeled | Ditches, streams, etc. | Frequent |
| 32 | — <i>stagnalis</i> (Baster) | Yellowish or reddish | Operculum. Cone shape, solidity | Brackish marshes close to sea | Common |
| 33 | <i>Valvata cristata</i> (Müller) | Pale horn colour | Operculum. Planorbis shape | Ditches, canals, etc. | Frequent |
| 34 | — <i>piscinalis</i> (Müller) | Brownish yellow | Operculum. Circular mouth, rounded whorls | Ditto | Common |
| 35 | <i>Bithynia tentaculata</i> (Linné) | Horn colour, often golden | Operculum. Glossiness, transparency | Ditches, rivers, canals, etc. | Common |
| 36 | — <i>leachii</i> (Shepp.) | Horn colour ... | Operculum. Deep suture, roundish mouth, size | Ditches, canals, etc. | Local |
| 37 | <i>Vivipara vivipara</i> (Linné) | Pale green with dark bands | Operculum. Blunt apex, no umbilicus | Canals, lakes, etc. | Common |
| 38 | — <i>contacta</i> (Millet) | Dark green with dark bands | Operculum. Sharp apex, deep suture, umbilicus | Canals, deep ditches, etc. | Frequent |
| 39 | <i>Succinea putris</i> (Linné) | Amber colour ... | Large body whorl, short spire, thinness | Amphibious, on water plants | Common |
| 40 | — <i>oblonga</i> (Drap.) | Greenish or yellowish | Small size, deep suture, long spire | Marshes, near sea coast | Rare |
| 41 | — <i>elegans</i> (Risso) | Deep amber colour | Narrow mouth, slender shape | Amphibious, on water plants | Common |

PLATE III.—(BIVALVES).

| <i>Fig. Species & Authority</i> | <i>Colouring</i> | <i>Chief Characteristics</i> | <i>Habitat</i> | <i>Frequency</i> |
|--|-----------------------------|---|------------------------|------------------|
| 42 <i>Pisidium fontinale</i> (Draparnaud) | Grey | Prominent beaks, triangular shape | Ditches, ponds, etc. | Common |
| 43 — <i>amicum</i> (Müll.) | Greyish or yellowish | Large size, ridges, triangular shape | Ditto | Frequent |
| 44 — <i>miliun</i> (Held) | Grey | Prominent beaks, oblong shape | Ditto | Frequent |
| 45 — <i>pusillum</i> (Gmel.) | Greyish or yellowish | Beaks nearly central, oval shape | Ditto | Common |
| 46 — <i>nitidum</i> (Jenyns) | Grey | Glossiness, beaks central, round shape | Ditto | Local |
| 47 <i>Sphærium corneum</i> (Linné) | Yellowish horn-colour | Globular form, oval shape | Ditto | Common |
| 48 — <i>lacustre</i> (Mull.) | Grey | Capped beaks, sharp edges, squarish shape | Ditto | Frequent |
| 49 — <i>rivicola</i> (Leach) | Reddish or olive-brown | Large size, colour | Canals and slow rivers | Frequent |
| 50 — <i>pallidum</i> (Gray) | Greyish or yellowish | Oblong shape, sharp shoulders | Canals and ponds | Local |
| 51 <i>Unio pictorum</i> (Linné) | Yellowish green | Narrow oblong shape | Canals, lakes, etc. | Common |
| 52 — <i>tumidus</i> = (Philippsson) | Dark brown ... | Oval shape, weight, and solidity | Ditto | Common |
| 53 — <i>margaritifer</i> (Linné) | Dull black ... | Colour, eroded beaks | Rivers | Local |
| 54 <i>Anodonta cygnea</i> (Linné) | Yellowish green or brown | Large size, parallel upper and lower margins | Canals, lakes, etc. | Common |
| 55 — <i>anatina</i> (Linné) | Ditto | Raised hinge-line forming angle with lower margin | Ditto | Common |
| 56 <i>Dreissensia polymorpha</i> (Pallas) | Yellowish, zig-zag markings | Boat shape, marking, byssus attachment | Canals, rivers, lakes | Common |

PLATE I.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.

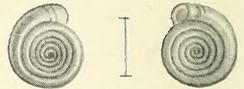


FIG. 6.

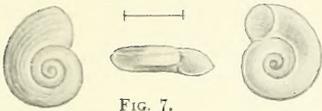


FIG. 7.



FIG. 8.

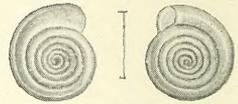


FIG. 9.

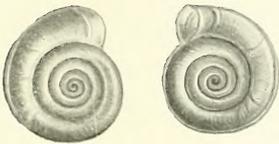


FIG. 10.

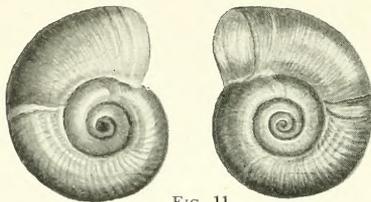


FIG. 11.

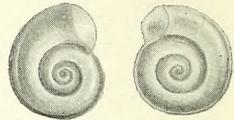


FIG. 12.

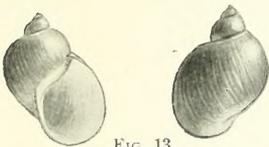


FIG. 13.



FIG. 13 a.



FIG. 13 b.



FIG. 13 c.



FIG. 13 d.

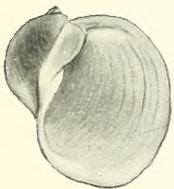


FIG. 13 e.

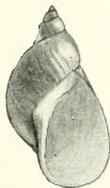


FIG. 13 f.

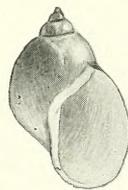


FIG. 13 g.



FIG. 14.

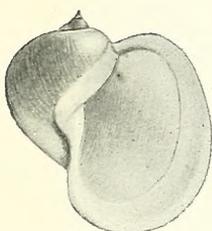


FIG. 15.

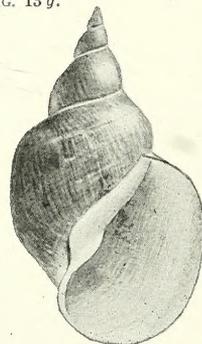
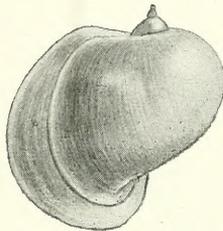


FIG. 16.

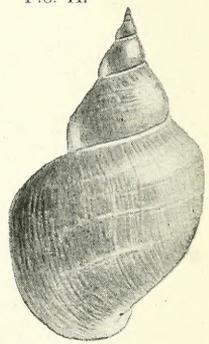


PLATE III.

FIG.

- 42 *Pisidium fontinale* v. *henslowana* (Shepp.) With ridge near the beaks.
 — — — var. *pulchella* (Jenyms) Glossy, strongly grooved.
 — — — var. *cinerea* (Alder) Larger and flatter.
 — — — var. *pallida* (Gassies) More ventricose, with rays from beaks to margin
- 43 — *amicum* var. *læviuscula* (Moq.) Larger, fainter striae.
 — — — var. *flavescens* (Moq.) Pale yellow all over.
- 44 — *miliun* var. *alpestris* (Clessin) Very globose, strongly striated.
- 45 — *pusillum* var. *obtusalis* (Lamarek) Smaller, more tumid.
 — — — var. *grandis* (Adams) Much larger, 5 mm. × 6 mm.
- 46 — *nitidum* var. *splendens* (Moq.) Larger, lemon coloured.
 — — — var. *globosa* (Adams) Sphæroidal.
- 47 *Sphærium corneum* var. *psidioides* (Gray) Triangular, striae coarser.
 — — — var. *scaldiana* (Normand) Ovate, paler than type.
 — — — var. *nucleus* (Studer) Smaller, nearly spherical.
 — — — var. *flavescens* (Macgill) Pale yellow.
- 48 — *lacustre* var. *ryckholti* (Normand) Small, beaks prominent, shoulders rounded.
 — — — var. *rotunda* (Jeffreys) Rounder and flatter.
 — — — var. *brochoniana* (Bourg.) Larger and flatter.
 — — — var. *ovalis* (Férussac) Somewhat oval, with indistinct calculation.
- 49 — *rivicola* var. *flavescens* (Moq.) Yellow.
- 51 *Unio pictorum* var. *curvirostris* (Norm.) Smaller, shorter, flatter.
 — — — var. *latior* (Jeffreys) Broader, shorter, yellow-brown.
 — — — var. *compressa* (Jeffreys) Very broad and flat.
 — — — var. *radiata* (Moq.) With greenish rays.
 — — — var. *platyrinchoidea* (Dup.) With posterior margin produced.
- 52 — *tumidus* var. *mülleri* (Rossm.) More oval.
 — — — var. *ovalis* (Mont.) Wedge-shaped.
 — — — var. *ponderosa* (Pascal) Larger and very solid.
 — — — var. *radiata* (Colb.) With greenish or yellowish rays.
- 53 — *margaritifer* var. *sinuata* (Lam.) Broader, lower margin incurved.
 — — — var. *roissyi* (Mich.) Longer, lower margin rounded outwards.
- 54 *Anodonta cygnea* var. *arenaria* (Schröter) Broader, upper and lower margins parallel.
 — — — var. *rostrata* (Rossm.) Ovate, crested upper margin.
 — — — var. *stagnalis* (Sowerby) Thin, inflated, anterior end rounded, olive-green
 — — — var. *incrassata* (Shepp.) More swollen and solid.
 — — — var. *radiata* (Müller) Streaked yellowish-green.
 — — — var. *pallida* (Jeffreys) Wedge-shaped, light yellow.
- 55 — *anatina* var. *ventricosa* (C. Pfr.) Larger, more solid.
 — — — var. *complanata* (Rossm.) Oval, compressed, beaks close to the anterior margin.
 — — — var. *radiata* (Jeffreys) With green and yellow rays.
- 56 *Dreissensia polymorpha* v. *angusta* (Colb.) Narrower.
 — — — var. *dilatata* (Colb.) Broad and flat, beaks protruding beyond hinge

PLATE I. (continued).

| | | |
|----|--|--|
| 14 | <i>Limnæa palustris</i> var. <i>corva</i> (Guelin) | Larger, more tumid, dark purple. |
| — | — var. <i>obesa</i> (Taylor) | Very tumid. |
| — | — var. <i>elongata</i> (Moq.) | Spire more produced. |
| — | — var. <i>conica</i> (Jeffreys) | Conical, suture deep, with an umbilical cleft. |
| — | — var. <i>minor</i> (Taylor) | Smaller, 8 mm. \times $4\frac{1}{2}$ mm. |
| — | — var. <i>tincta</i> (Jeffreys) | Shorter and broader, mouth purplish. |
| — | — var. <i>lacunosa</i> (Zgl.) | With rows of malleations. |
| — | — var. <i>fasciata</i> (Nelson) | With three spiral dark bands on body whorl. |
| — | — var. <i>roseolabiata</i> (Jeff.) | With rose-coloured rib. |
| — | — var. <i>albida</i> (Nelson) | White. |
| — | — m. <i>decollatum</i> (Jeffreys) | Spire truncate. |
| 15 | — <i>auricularia</i> var. <i>acuta</i> (Jeffreys) | Smaller, oblong, mouth narrower. |
| — | — var. <i>ampla</i> (Hartmann) | Aperture extending beyond apex. |
| — | — var. <i>reflexa</i> (Nelson) | Outer lip much reflected. |
| — | — var. <i>magna</i> (Colb.) | Larger, mouth narrower. |
| — | — var. <i>albida</i> (Jeffrey.) | White. |
| 16 | — <i>stagnalis</i> var. <i>fragilis</i> (Linné) | Smaller, thinner, more slender. |
| — | — var. <i>bottnica</i> (Clessin) | Smaller, dark, suture deep. |
| — | — var. <i>lacustris</i> (Studer) | Spire short, body whorl large. |
| — | — var. <i>labiata</i> (Jeffreys) | Outer lip enlarged. |
| — | — var. <i>variegata</i> (Hazay) | With variegated white markings. |
| — | — var. <i>albida</i> (Jeffreys) | White. |
| — | — m. <i>sinistrorsum</i> (Jeffreys) | Sinistral. |
| — | — <i>scalariforme</i> | Whorls disconnected. |

PLATE II.

FIG.

| | | |
|----|--|---|
| 17 | <i>Amphipeplea glutinosa</i> v. <i>mucronata</i> (Jeff.) | Spire more produced. |
| — | — var. <i>albida</i> (Williams) | White. |
| 19 | <i>Limnæa truncatula</i> var. <i>ventricosa</i> (Moq.) | Tumid, spire short. |
| — | — var. <i>elegans</i> (Jeffreys) | Larger, tapering spire. |
| — | — var. <i>microstoma</i> (Drouet) | Mouth contracted. |
| — | — var. <i>albida</i> (Nelson) | White. |
| — | — m. <i>scalariforme</i> (Jeffreys) | Whorls disunited. |
| 20 | — <i>glabra</i> var. <i>elongata</i> (Jeffreys) | Spire produced. |
| 21 | <i>Physa fontinalis</i> var. <i>inflata</i> (Moq.) | Much larger, more ventricose. |
| — | — var. <i>curta</i> (Jeffreys) | Spire very short. |
| — | — var. <i>oblonga</i> (Jeffreys) | Spire produced. |
| — | — var. <i>albina</i> (Jeffreys) | White. |
| 22 | <i>Aplexa hypnorum</i> var. <i>rubra</i> (Tryon) | Dark reddish. |
| 25 | <i>Ancylus fluviatilis</i> var. <i>capuloides</i> (Jan.) | Larger, apex near the centre. |
| — | — var. <i>gibbosa</i> (Bourguignat) | Small, with apex overhanging posterior margin |
| — | — var. <i>stricta</i> (Morel) | Much elevated, sides compressed. |
| — | — var. <i>albida</i> (Jeffreys) | White. |
| 26 | <i>Velletia lacustris</i> var. <i>compressa</i> (Jeffreys) | Broader and flatter. |
| — | — var. <i>moquiniana</i> (Bourg.) | Elevated, compressed at sides. |
| — | — var. <i>albida</i> (Jeffreys) | White. |
| 27 | <i>Neritina fluviatilis</i> var. <i>cerina</i> (Colb.) | Lemon-coloured. |
| — | — var. <i>trifasciata</i> (Colb.) | With three spiral dark bands. |
| — | — var. <i>undulata</i> (Colb.) | Transversely banded. |
| — | — var. <i>nigrescens</i> (Coll.) | Uniformly dark coloured. |

PLATE II. (continued).

| | | |
|----|---|--|
| 20 | <i>Paludestrina ventrosa</i> var. <i>ovata</i> (Jeffreys) | Spire shorter, whorls four, more tumid. |
| — | — var. <i>elongata</i> (Jeffreys) | Spire longer. |
| — | — var. <i>pellucida</i> (Jeffreys) | White, transparent. |
| 31 | — <i>jenkinsi</i> var. <i>carinata</i> (Smith) | Kegeled. |
| 32 | — <i>stagnalis</i> var. <i>tumida</i> (Marshall) | More tumid. |
| — | — var. <i>barlesi</i> (Jeffreys) | Smaller, spindle-shaped, mouth smaller. |
| — | — var. <i>octona</i> (Linné) | Smaller, thinner, suture deeper. |
| — | — var. <i>albida</i> (Jeffreys) | Whitish. |
| 33 | <i>Valvata cristata</i> var. <i>alba</i> (Rowe) | White. |
| 34 | — <i>piscinalis</i> var. <i>depressa</i> (C. Pir.) | Flatter, umbilicus larger. |
| — | — var. <i>antiqua</i> (Sowerby) | Spire more raised. |
| — | — var. <i>acuminata</i> (Jeffreys) | Spire more produced, apex sharper. |
| — | — var. <i>pusilla</i> (Muller) | Smaller, striae stronger, whorls 4½. |
| — | — m. <i>sinistrorsum</i> (Jeffreys) | Sinistral. |
| 35 | <i>Bythinia tentaculata</i> var. <i>producta</i> (Menke) | Larger, spire produced. |
| — | — var. <i>ventricosa</i> (Menke) | Shorter, more tumid. |
| — | — var. <i>excavata</i> (Jeffreys) | Suture deeper, whorls more rounded. |
| — | — var. <i>albida</i> (Rimmer) | White. |
| 36 | — <i>leachi</i> var. <i>elongata</i> (Jeffreys) | Spire produced. |
| — | — var. <i>albida</i> (Rimmer) | White. |
| 37 | <i>Vivipara vivipara</i> v. <i>efasciata</i> (Pickering) | Without bands. |
| — | — var. <i>atro-purpurea</i> (Lloyd) | Dark purple all over. |
| — | — var. <i>albida</i> (Nels. & Tayl.) | White. |
| — | — m. <i>sinistrorsum</i> | Sinistral. |
| 38 | — <i>contacta</i> var. <i>virescens</i> (Jeffreys) | Without bands. |
| 39 | <i>Succinea putris</i> var. <i>subglobosa</i> (Jeffreys) | Shorter, broader, more solid. |
| — | — var. <i>stagnalis</i> (Gassies) | Smaller, straighter front margin. |
| — | — var. <i>solidula</i> (Jeffreys) | Thicker and deeper coloured. |
| — | — var. <i>vires</i> (Moq.) | Thinner and paler. |
| — | — var. <i>albida</i> (Murch) | White. |
| 40 | — <i>oblonga</i> var. <i>alba</i> (Wright) | White. |
| — | — m. <i>sinistrorsum</i> (Taylor) | Sinistral. |
| 41 | — <i>elegans</i> var. <i>longiscata</i> (Morel) | Shell longer, mouth compressed. |
| — | — var. <i>peifferi</i> (Rossin.) | Shorter, not so much drawn out. |
| — | — var. <i>virescens</i> (Morel) | Thin, greenish yellow. |
| — | — var. <i>ochracea</i> (Betta) | Smaller, thicker, spire longer, mouth small. |
| — | — var. <i>albida</i> (Taylor) | White. |
| — | — m. <i>sinistrorsum</i> (Baudon) | Sinistral. |

VARIETIES AND MONSTROSITIES.

PLATE I.

PLATE I.—(UNIVALVES).

| Fig. | Species & Authority | Colouring. | Chief Characteristics | Habitat | Frequency |
|------|---------------------------------------|------------------------|--|-------------------------------|-----------|
| 1 | <i>Segmentina nitida</i> (Müller) | Reddish horn colour | Nautilus-like, internal septa visible outside | Ditches and slow streams | Local |
| 2 | <i>Planorbis fontanus</i> (Lightfoot) | Pale horn colour | Flatness, thinness, sharp keel | Ditches and ponds | Frequent |
| 3 | — <i>nautilus</i> (Linné) | Greyish white ... | Small size, nautilus-shape, ridges | Ditto | Frequent |
| 4 | — <i>dilatatus</i> (Gould) | Horn colour ... | Expanded mouth (introduced) | Canals in Lancashire | Rare |
| 5 | — <i>parvus</i> (Say) | Greyish horn colour | Smoothness, glossiness, absence of keel | Marshes, ditches, and ponds | Local |
| 6 | — <i>spirorbis</i> (Müll.) | Dark horn colour | Faint keel, roundish mouth | Ditches, streams, etc. | Common |
| 7 | — <i>albus</i> (Müller) | White ... | Spiral striations | Ditches, canals, and ponds | Common |
| 8 | — <i>contortus</i> (Linné) | Dull brown, opaque | Solidity, compactness, crescent-shaped mouth | Ditches and ponds | Frequent |
| 9 | — <i>vortex</i> (Linné) | Pale horn colour | Sharp keel, oval mouth | Ditches, streams, etc. | Common |
| 10 | — <i>umbilicatus</i> (Müller) | Brown, nearly opaque | Solidity, blunt keel at base of whorl | Ditto | Common |
| 11 | — <i>corneus</i> (Linné) | Dark horn colour | Large size; young shells hispid | Ditches, canals, etc. | Common |
| 12 | — <i>carinatus</i> (Müller) | Yellowish horn colour | Thinness, sharp keel in centre of whorl | Ditches, streams, etc. | Local |
| 13 | <i>Limnæa peregra</i> (Müller) | Variable ... | Variation in shape and size | Everywhere | Abundant |
| a | — var. <i>burnetti</i> | Yellowish horn colour | Extremely short spire | Loch Skene, Dumfriesshire | Rare |
| b | — var. <i>acuminata</i> | Variable ... | Produced spire | Ditches, ponds, etc. | Frequent |
| c | — var. <i>lutea</i> | Yellowish horn colour | Solidity, short spire | Near sea-coast | Local |
| d | — var. <i>lacustris</i> | Ditto | Transverse grooves, glossiness, short spire | Lakes in the north | Frequent |
| e | — var. <i>obtusa</i> | Ditto | Large size, expanded mouth | Ditches, ponds, etc. | Local |
| f | — var. <i>oblonga</i> | Ditto | Oblong shape, compressed in front | Ditches, streams, etc. | Local |
| g | — var. <i>ovata</i> | Variable ... | Thinness, convex whorls, oblong mouth | Ditches, ponds, etc. | Frequent |
| 14 | <i>Limnæa palustris</i> (Müller) | Dull brown or purplish | Tapering spire, smallish mouth | Ditches, marshes, ponds, etc. | Common |
| 15 | — <i>auricularia</i> (Linné) | Yellowish horn colour | Very expanded mouth, short and sharp pointed spire | Lakes, canals, and rivers | Frequent |
| 16 | — <i>stagnalis</i> (Linné) | Greyish horn colour | Large size, tapering spire | Canals, ponds, rivers, etc. | Common |

FIG.

| | | |
|------|---|---|
| 1 | <i>Segmentina nitida</i> var. <i>albina</i> (Taylor) | White. |
| 2 | <i>Planorbis fontanus</i> var. <i>albida</i> (Nelson) | White. |
| 3 | — <i>nautilus</i> var. <i>laevigata</i> (Adami) | Without ridges. |
| 5 | — <i>parvus</i> var. <i>compressa</i> (Lloyd) | More concave below, whorls rounder. |
| 6 | — <i>spirorbis</i> var. <i>albida</i> (Jeffreys) | Whitish. |
| — | — <i>ecarinata</i> (Jeffreys) | No keel. |
| — | — <i>albida</i> (Nelson) | White. |
| — | — m. <i>scalariforme</i> (N. & T.) | Whorls disunited. |
| 7 | — <i>albus</i> var. <i>draparnaldi</i> (Shepp.) | Carinated, without spiral striae. |
| — | — var. <i>sulcata</i> (Taylor) | With strong curved cross ridges and furrows. |
| — | — m. <i>scalariforme</i> | Whorls twisted or disunited. |
| 9 | — <i>vortex</i> var. <i>compressa</i> (Mich.) | Thinner, flatter, more sharply keeled. |
| 10 | — <i>umbilicatus</i> var. <i>rhombea</i> (Turton) | Smaller, more solid, more concave below. |
| — | — var. <i>albina</i> (Jeffreys) | White. |
| — | — m. <i>sinistrorsum</i> (Taylor) | Sinistral. |
| 11 | — <i>corneus</i> var. <i>albina</i> (Mon.) | White. |
| 12 | — <i>carinatus</i> var. <i>disciformis</i> (Jeffreys) | Flatter and thinner. |
| — | — var. <i>albida</i> (Hudson) | White. |
| 13 a | <i>Limnæa peregra</i> var. <i>burnetti</i> (Alder) | Globose, rather solid, spire scarcely elevated, apex intorted. (Figured). |
| — | — m. <i>scalariforme</i> (Jeffreys) | Whorls disjointed. |
| — | — m. <i>sinistrorsum</i> (Jeffreys) | Sinistral. |
| — | — m. <i>decollatum</i> (Jeffreys). | Spire truncate. |
| b | — var. <i>acuminata</i> (Jeffreys) | Produced spire, smallish mouth. (Figured). |
| — | — var. <i>intermedia</i> (Ferrussac) | Thin, compressed towards front margin, spire produced, mouth expanded. |
| c | — var. <i>lutea</i> (Montagu) | Very solid, short spire. (Figured). |
| — | — var. <i>diaphana</i> (Parreyss) | Very thin and transparent. |
| — | — var. <i>picta</i> (Jeffreys) | Shell spirally banded brown and white |
| — | — var. <i>candida</i> (Porro) | White. |
| — | — var. <i>lineata</i> (Bean) | Shell having strong spiral ridges. |
| — | — var. <i>labiosa</i> (Jeffreys) | Outer lip expanded and reflected. |
| d | — var. <i>lacustris</i> (Leach) | Shell small, glossy, with transverse grooves. (Figured). |
| — | — var. <i>inflata</i> (Kobelt) | Shell large, spire small, whorls not very convex, mouth pear shaped. |
| — | — var. <i>patula</i> (Da Costa) | Shell large, spire short, whorls very convex, mouth ample. |
| e | — var. <i>obtusa</i> (Kobelt) | Shell large, spire small, mouth ample. (Figd.). |
| f | — var. <i>oblonga</i> (Jeffreys) | Oblong, compressed in front. (Figured). |
| — | — var. <i>boissyi</i> (Dupuy) | Small, globose, whorls convex, spire produced. |
| — | — var. <i>vulgaris</i> (Pfeiffer) | Small, spire not very prominent, whorls and aperture less convex than type. |
| — | — var. <i>pulchella</i> (Rottfien) | Small, lines of growth pronounced, slight margin to aperture. |
| — | — var. <i>succineiformis</i> (Jeff.) | Very thin, shaped like a <i>Succinea</i> . |
| — | — var. <i>maritima</i> (Jeffreys) | Dwarfed, solid, spire produced, suture deep. |
| — | — var. <i>microstoma</i> (Kobelt) | Long and slender spire, like <i>L. palustris</i> . |
| — | — var. <i>ovata</i> (Draparnaud) | Shell large, rather thin, spire short, mouth oblong. (Figured). |
| g | — v. <i>stagnalisformis</i> (Taylor) | Somewhat fusiform or spindle shaped. |

PLATE II.



FIG. 17.



FIG. 18.



FIG. 19.



FIG. 20.



FIG. 21.



FIG. 22.



FIG. 23.



FIG. 24.



FIG. 25.



FIG. 26.



FIG. 27.



FIG. 28.



FIG. 29.



FIG. 30.



FIG. 31.



FIG. 32.



FIG. 33.



FIG. 34.



FIG. 35.



FIG. 36.



FIG. 37.



FIG. 38.



FIG. 39.



FIG. 40.



FIG. 41.

PLATE III.



FIG. 42.



FIG. 43.



FIG. 44.



FIG. 47.



FIG. 45.



FIG. 46.



FIG. 49.



FIG. 48.



FIG. 51.



FIG. 50.



FIG. 52.

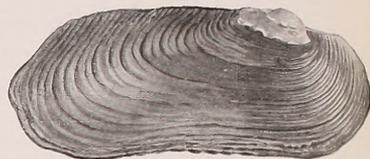


FIG. 53.

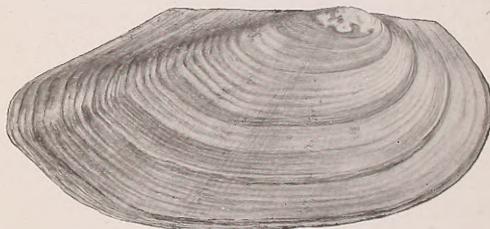


FIG. 54.



FIG. 55.



FIG. 56.



