

**THE WET-SIEVED FRESHWATER MOLLUSCAN FAUNA FROM 8 MOORFIELDS
AND 87 MOORGATE SAMPLES [9] {5} AND [13] {6}, LONDON EC2, CITY OF
LONDON (XSP10)**

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1. Introduction and methodology

Wet-sieving and flotation of bulk samples [9] {5} and [13] {6} from XSP10 yielded assemblages of well-preserved mollusc shell. Visual inspection, using a binocular microscope, indicated that all derived from freshwater species. This short report identifies the species present and their approximate relative abundance and indicates their ecological implications for interpretation of local habitat and conditions. Identification followed Macan 1977. Interpretation followed Davies 2008; and Kerney 1999. Table 1 shows species-composition, relative abundance for each sample.

Table 1: Wet-sieved freshwater mollusc shell from XSP10 [9] {5} and [13] {6}/summary

2. The fauna

For both samples, the mollusc fauna derived entirely from pond snails Lymnaeidae and ram's-horn snails Planorbidae; both families show considerable *inter*-specific differences in terms of ecological requirements and, therefore, habitat implications. All species identified from the samples are common and widespread in suitable habitats throughout t lowland SE England.

Sample [9] {5} produced a mollusc fauna derived from seven snail species; mainly common bithynia *Bithynia tentaculata*, common or wandering pond snail *Lymnaea peregra*, twisted ram's-horn *Bathymphalos contortus* and margined ram's-horn *Planorbis planorbis* with single examples of marsh pond snail *Lymnaea palustris*, nautilus ram's-horn *Gyraulus crista* and shiny ram's-horn *Segmentina nitida*.

Sample [13] {6} produced a mollusc fauna derived from six snail species; mainly common bithynia *Bithynia tentaculata*, common or wandering pond snail *Lymnaea peregra*, twisted ram's-horn and margined ram's-horn *Planorbis planorbis* with a single shell of marsh pond snail *Lymnaea palustris* and a few shells of button or white-lipped ram's-horn *Anisus leucostoma*.

Common bithynia *B. tentaculata* occurs in slow-moving, well-oxygenated hard water, particularly in muddy-bottomed situations with dense growths of aquatic plants (Kerney 1999, 39).

Common/wandering pond snail *L. peregra* is a ubiquitous species in all kinds of hard and soft waters. It is a rapid colonist of new, man-made habitats and is tolerant of brackish water and mild pollution (Kerney 1999, 56).

Marsh pond snail *Lymnaea palustris* is a mainly lowland species living in stagnant or slowly moving water including those liable to summer drying (Kerney 1990, 53).

Twisted ram's-horn *B. contortus* occurs in hard and soft water in a wide variety of aquatic habitats ranging from stagnant drains to well-vegetated clean running water. It avoids situations liable to seasonal drying (Kerney 1999, 63).

Margined ram's-horn *P. planorbis* is found in all kinds of well-vegetated aquatic habitats of lowland type but is especially characteristic of hard-water shallow pools and swampy ditches liable to dry up in summer; it is often associated with marsh pond snail *L. palustris* and button/white-lipped ram's-horn *A. leucostoma* (Kerney 1999, 58).

Nautilus ram's-horn *G. crista* is a minute species found in hard and soft water in a range of situations ranging from slow-flowing rivers to weedy ditches except for those liable to dry up (Kerney 1999, 67).

Button or white-lipped ram's-horn *A. leucostoma* is a lowland species with some preference for hard water. It is found in a wide variety of aquatic habitats but is most typical of swampy pools and ditches especially those liable to summer drying (Kerney 1999, 60).

Shiny ram's-horn *S. nitida* occurs today mainly in drainage ditches in marsh levels, usually in clean, hard, well-vegetated waters with a rich associated fauna. Now effectively extinct over most of England except for East Anglia, Kent and Sussex, it was common around London until the 19th century. Reasons for the decline may include pollution and reduction in water level; surviving populations prefer uncleared ditches (Davies 2008, 22) in areas of traditional grazing with low phosphate and nitrate enrichment (Kerney 1999, 69).

3. Habitat implications

Although eight species of freshwater snail were recovered from samples [9] {5} and [13] {6}, four species; common bithynia, common/wandering pond snail, twisted ram's-horn and margined ram's-horn, provided virtually all of the shell count. Common/wandering pond snail is a ubiquitous, ecologically catholic species tolerant of hard and soft water and of some degree of pollution, the other species are predominantly hard-water snails with a preference for well-oxygenated and vegetated situations. Margined ram's-horn, unlike the other three species, prefers situations liable to summer drying. The less commonly recovered species are also divided between those able to tolerate seasonal drying (marsh pond snail, button/white-lipped ram's-horn) and those tending to avoid it (nautilus ram's-horn, shiny ram's-horn). Overall, the mollusc assemblage suggests a well-vegetated still or slow-flowing, well vegetated water body with permanent areas predominant over others more susceptible to seasonal drying. Although common/wandering pond snail is a major component of the fauna, the ecological requirements of the species-diversity of the bulk of the assemblage suggest that there was no gross pollution.

The predominant species-composition of each sample; common bithynia, common/wandering pond snail, twisted ram's-horn and margined ram's-horn, suggest an early (primary) stage in the development of reed swamp but with some less abundant species; marsh pond snail and button/white-lipped ram's-horn, also indicative of a later stage of successional development into *Glyceria* (sweet grass) reed swamp (Davies 2008, 27).

4. Bibliography

Davies, P, 2008 *Snails: archaeology and landscape change*
Oxford. Oxbow Books

Kerney, M, 1999 *Atlas of the land and freshwater molluscs of Britain and Ireland*
Colchester. Harley Books

Macan, T T, 1977 A key to the British fresh- and brackish-water gastropods
Freshwater Biological Association scientific publication no.13

5. Table

Table 1: Wet-sieved freshwater mollusc shell from XSP10 [9] {5} and [13] {6}/summary