Key to coastal species of British Mysidae (from Makings with *Heteromysis / Heteromysoides* revisions – note that *Heteromysis formosa* is an American species)

1. Telson (excluding spines) with apical cleft, i.e. distinctly notched or bifid at apex (Figs. 1 D, J; 2 U. Note that some species have a smaller cleft than these).....2

   Telson without apical cleft, more or less rounded, pointed, or truncate but not notched at the apex (Figs. 1 M, N; 2 V-Z).....21

2. Exouropod with spines, not setae, on outer margin. *Gastrosaccus* and *Anchialina* (Figs. 1 D; 2 N, O).....3

   Exouropod with setae, not spines, on outer margin (Fig. 1 L).....7

3. Fifth abdominal segment rather narrow when seen from above. From the side it shows a dorsal ridge and a spine-like median dorsal process as its posterior margin (Fig. 2 K) .... *Gastrosaccus spinifer*

   Fifth abdominal segment may be narrowed as described above, but without a dorsal ridge or median dorsal process (Fig. 1 D).....4

4. Telson armed with 20 or more lateral spines on each side. Outer margin of exouropod with 20 or more relatively small spines (Fig. 2 O). Dorsal posterior margin of carapace straight (Fig. 2 L). .....*Anchialina agilis*

   Telson armed with up to 14 lateral spines on each side. Outer margin of exouropod with 15 or less, relatively massive, spines (Fig. 2 N). Dorsal posterior margin of carapace deeply concave (Fig. 1 D).....5

5. Fifth abdominal segment narrow; nearly or quite as narrow as the sixth segment (Fig. 1 D). Telson about twice as long as broad, with 5 or 6 large lateral spines on each side. .... *Gastrosaccus sanctus*

   Fifth abdominal somite not as narrow as the sixth. Telson about 3 times as long as broad, with 8 or more lateral spines on each side. 6

6. Posterior margin of carapace with small lobes turning upwards and forwards as in *typical G. sanctus* (Fig. 1 D). .....*Gastrosaccus lobatus*

   Posterior margin of carapace with no such lobes.....*Gastrosaccus normani*

7. Antennal scale with setae all round (similar to Fig. 2 I, J) *Heteromysis, Heteromysoides* and *Mysidopsis* 8

   Antennal scale with a rather long smooth and naked outer margin (Fig. 1 H; 2 A-H). Remainder of edge, medial to this, bears setae.....12

8. Apical cleft of telson with teeth inside. Endopod of third thoracic limb short and stout, with a prehensile terminal claw.....9

   Apical notch in telson without teeth or setae, smooth-edged inside. Endopod of third thoracic limb normal, like the others. ..... *Mysidopsis angusta*

9. Eyes and eyestalks normally developed.. 10

   Eyestalks rectangular and flattened with small anterio-lateral eyes. ..... *Heteromysoides* cf. *cotti*

10. Endouropod with numerous spines on the inner margin. Rostrum broadly rounded. Telson with 15-17 lateral spines, without a separate proximal spine 11

    Endouropod with a single spine adjacent to the statocyst. Rostrum acute. Telson with 10-14 lateral spines distally and a single proximal spine ..... *Heteromysis microps*

11. Lateral margins of telson without proximal spines. Inner apical spine of telson not longer than outer apical spine. Telson cleft with 16 inner teeth. ..... *Heteromysis norvegica*

    Spines present on entire lateral margins of telson. Inner apical spine on telson much larger than the outer apical spine. Telson cleft with 12 inner teeth ..... *Heteromysis armoricana*

12. The smooth naked outer margin of antennal scale, about half the length of the scale, not ending in a spine, running smoothly into the setose part (Fig. 2 H). Telson has lateral spines restricted to the apical half. Eyestalk very short, shorter and smaller than the large black corneal part of the eye. Fresh specimens usually of a red colour. ..... *Hemimysis lamornae*

    The smooth naked outer edge of antennal scale ending in a small subterminal spine (Fig. 1 H; 2 A-G). Telson has lateral spines from base to apex (as in Fig. 1 J; 2 U). Eyestalk may be small but in most cases as large as corneal part of eye (Fig. 1 G). Fresh specimens not normally red. 13

13. Antennal scale rather parallel-sided, with short anterior lobe (see Fig. 1 I). Anterior lobe projecting only slightly forwards beyond base of subterminal spine, by twice the length of the spine or less (Fig. 1 H, I; 2 A, B). Base of spine weakly constricted or articulated when seen under high magnification (Fig. 2 B). Corneal part of eyes carried beyond carapace. ..... *Praunus* 14

    Antennal scale broad, ovate, with moderate anterior lobe (Fig. 2 F, G); or narrow and elongated with long anterior lobe (Fig. 2 C-E). Anterior lobe projecting forwards well beyond base of subterminal spine, by as least twice the length of the spine. Base of spine with no trace of constriction or articulation (Fig. 2 D). Corneal part of eyes not reaching much beyond carapace (except in *Schistomysis spiritus*, Fig. 1 C, which has anterior lobe of antennal scale several times longer than the subterminal spine Fig. 2 C). ..... *Paramysis* and *Schistomysis* 16

14. Antennal scale about 4 times as long as broad, anterior lobe about twice as long as subterminal spine (Fig. 1 H, I). Eyestalk looks slightly wider than long. Telson with 15-17 lateral spines. The series of chromatophores along the ventral mid-line of abdomen consists of only one on each segment. Two chromatophores on telson, one on each blade of uropod. Living specimens red-brown to almost colourless. ..... *Praunus inermis*

    Antennal scale prominently long and strap-like; at least 5 times as long as broad, anterior lobe less than twice as long as subterminal spine (Fig. 2 A, B). Eyestalk looks slightly or distinctly longer than wide. Telson with 18-28 lateral spines. Four or more chromatophores on telson, several on each blade of uropod. Living specimens blackish, grey-brown or greenish to almost colourless 15

15. Antennal scale only 5 or 6 times as long as broad, anterior lobe slightly longer than subterminal spine (Fig. 2 A, B). Telson with 18-24 lateral spines. Only three pairs of chromatophores on the ventral surface of thorax, between the legs. Usually four chromatophores on telson and each exouropod, two on each endouropod. Living specimens almost colourless or pale to dark green. ..... *Praunus neglectus*

    Antennal scale 7-8 times as long as broad, anterior lobe at most as long as subterminal spine. Telson with 22-28 lateral spines (Fig. 1 J). A separate pair of chromatophore on the ventral surface of each thoracic segment, between the legs. Usually more than 4 chromatophores on telson and 4 or more on each exouropod, 3 or 4 on each endouropod. Living specimens blackish, grey-brown or yellowish to almost colourless. ..... *Praunus flexuosus*

16. Eyestalk longer than wide, like a slightly tapering cylinder, so that the eyes are carried appreciably beyond the margin of carapace (Fig. 1 C). Distal third of endouropod very slightly incurved (Fig. 2 Q).....*Schistomysis spiritus*

    Eyestalk no longer than its width, the eyes therefore not reaching appreciably beyond lateral margins of carapace. Endouropod either straight or with distal third incurving markedly (Fig. 2 R, S).....17

17. Distal third of endouropod incurving markedly (Fig. 2 R). Spines absent from inner margin of this part, which bears only setae, but strong spines proximal to it and one on the apex.....
    .....*Schistomysis parkeri*

    Endouropod straight. Spines along most of its inner margin from near base to near apex (similar to Fig. 2 S).....18

18. Antennal scale more than three times as long as broad (Fig. 2 E). Telson of adult with more than 24 lateral spines on each side (Fig. 2 U). Eyestalk, when seen from above, almost or quite as large as corneal part of eye (shrinkage of the tissues away from the cuticle may make the eyestalk look smaller). Combined carpo-propodus of thoracic endopods divided into 5-6 sub-segments (Fig. 1 E). The most basal one of these normal, longer than the following sub-segment, as in Fig. 1 E.
   19

    Antennal scale ovate, less than three times as long as broad (Fig. 2 G). Telson of adult with less than 24 lateral spines on each side. Eyestalk, when seen from above, only about half as big as corneal part of eye. Combined carpo-propodus of thoracic endopods divided into 4-5 sub-segments. The most basal one of these short, shorter than the following sub-segment and very slightly bulbous (often difficult to see Fig. 2 M).....*Paramysis* 20

19. Subterminal spine of antennal scale little more than half way along total length of scale. Spines on inner margin of endouropod extending, though sparsely, almost to apex and increasing steadily in size from base to apex. Telson with about 26 lateral spines, evenly spaced, the last one not particularly separated from the others.....*Schistomysis ornata*

    Subterminal spine of antennal scale at about two thirds of the total length of scale from base (Fig. 2 E). Spines on inner margin of endouropod irregular in size near the base, including both long and short ones, and stopping well short of apex (Fig. 2 S). Telson with about 30 lateral spines, a disproportionate gap between the last lateral spine and the preceding series (Fig. 2 U).....
    .....*Schistomysis kervillei*

20. Cleft of telson relatively wide and shallow; depth 1 to 1 and a half times width across mouth i.e. between the last lateral spines. Inner margin of endouropod bears 13-18 spines in an irregular row, not nearly reaching apex. Telson with 13-18 lateral spines on each side. ..... *Paramysis nouveli*

    Cleft of telson rather deep; about 1 and half times as deep as its width across mouth, i.e. between the last lateral spines. Inner margin of endouropod bears about 28 spines, a few of which are much larger than the others, in a row extending almost or quite to apex. Telson with 17-23 lateral spines.
    ..... *Paramysis arenosa*

21. Telson of characteristic shape: short, apex rounded, with numerous small teeth, and flanked on each side by an angular shoulder bearing a strong spine (Fig. 1 N). Eyestalks conspicuously long, cylindrical. ..... *Mesopodopsis slabberi*

    Telson of some other form, without prominent shoulders (Fig. 1 M; 2 V-Z). Eyestalks not exceptionally long.....22

22. Apex of telson truncate, either narrowly or broadly (Fig. 1 M; 2 V). Telson as a whole long, narrowing steadily towards the apex which is almost pointed (Fig. 2 V); or short and strongly truncated, almost trapezoidal (Fig. 1 M).....*Neomysis* and *Erythrops* 23

    Apex of telson rounded (Fig. 2 W-Z). 24

23. Telson long, sides becoming straight towards the apex, which is narrow, almost pointed (Fig. 2 V). Antennal scale setose all round (similar to Fig. 2 I, J). ..... *Neomysis integer*

    Telson short, strongly truncated, almost trapezoidal (Fig. 1 M). Antennal scale with naked outer margin (similar to Fig. 1 H). ..... *Erythrops elegans*

24. Exouropod divided (by a weak suture) into a shorter distal segment and a longer proximal portion (Fig. 2 P). Outer margin of proximal portion bearing spines, distal segment with setae instead of spines. (The suture may be obscure, but the division into distal and proximal portions is evident from the shape and armature of the exouropod). ..... *Siriella* 25

    Exouropod not divided, setose all round (similar to Fig. 1 L). 28

25. Rostrum long, tapering; normally projecting forwards beyond anterior margin of eyes; reaching second basal segment of antennule (Fig. 1 A, B: shorter in juveniles). Eyestalk elongated, carrying eyes beyond lateral margins of carapace (Fig. 1 A, B). Telson with four or five (rarely 3) small equal apical spines between the two large last lateral ones (Fig. 2 W). Exouropod rather long and parallel-sided, endouropod slightly incurving. Antennal scale long and almost parallel-sided. ..... *Siriella armata*

    Rostrum short; not, or barely, reaching anterior margin of eyes; reaching almost to middle, or less, of first basal segment of antennule (similar to Fig. 1 D). Eyestalks short and broad, not longer than wide. Telson with three small apical spines between the two large last lateral ones (Fig. 2 X, Y). Exouropod with slightly convex margins (Fig. 2 P). Endouropod straight (Fig. 2 T). Antennal scale sub-ovate. 26

26. The three small apical spines of telson equal, or nearly so (Fig. 2 X). Length of distal segment of exouropod about 1 and a half times its breadth (Fig. 2 P). Inner margin of endouropod armed with a series of large spines, all but the distal 3 or 4 of these having smaller spines between them (Fig. 2 T). ..... *Siriella clausii*

    The three small apical spines of telson forming a trident, consisting of two very small ones flanking a larger median one (Fig. 2 Y). Length of distal segment of exouropod about twice its breadth. Inner margin of endouropod having small spines between the large ones either restricted to the basal region or continuing to the apex. 27

27. Outer margin of exouropod with 9-16 spines. Spines on inner margin of endouropod forming a fairly regular series graduated in size from base to apex, with smaller ones interspersed near the base only. ..... *Siriella jaltensis*

    Outer margin of exouropod with 15-23 spines. Spines on inner margin of endouropod forming two series; one of larger spines, the other of shorter, more numerous spines between the longer ones, to the apex. ..... *Siriella norvegica*

28. A dorsal finger-like process on eyestalk, projecting outwards over edge of corneal part of eye. Two large median dorsal humps on carapace. Telson short, not much longer than its maximum width; armed with up to 18 very short lateral spines on each side. ..... *Mysidopsis gibbosa*

    No finger-like process on eyestalk, no humps on carapace. Telson more than twice as long as wide, armed with 20 or more lateral spines, which may be of varying size, on each side (similar to Fig. 2 Z). ..... *Acanthomysis* and *Leptomysis* 29

29. Telson without lateral spines on basal third, except for one or two near base. Distal two-thirds strongly spinose. Endouropod with few spines near base on inner margin; apical half without spines. ..... *Acanthomysis longicornis*

    Telson with lateral spines from base to apex (Fig. 2 Z). Inner margin of endouropod spinose from near base to apex. ..... *Leptomysis* 30

30. Integument microscopically scaly, looks bristly. A notch in carapace on each side of base of rostrum. Rostrum with a slight convexity on each side behind the tip. ..... *Leptomysis gracilis*

    Integument normal, smooth. No notches in carapace near base of rostrum. Edges of rostrum normal, more or less concave all along..... 31

31. Apical segment of antennal scale (best distinguished under rather low magnification) bears 10 setae or more on each side (best seen under high magnification) (Fig. 2 J). Rostrum relatively long, extending almost the whole length of the first basal segment of antennule. *Leptomysis mediterranea*

    Apical segment of antennal scale bears 6 setae or less on each side (Fig. 2 I). Rostrum short, extending only half way along first basal segment of antennule. ..... *Leptomysis lingvura*