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Key to the aquatic mollusks of  
Alberta prairies and parklands

KEY

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TO THE

AQUATIC  
MOLLUSKS  
of  
ALBERTA

PRAIRIES and PARKLANDS

Courtesy:  
Department of Biology\*  
University of Calgary

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CURRICULUM

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Illustrated by R. R. Duquette

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KEY TO THE AQUATIC MOLLUSKS OF THE PRAIRIES AND  
PARKLANDS OF ALBERTA

Snails are generally common in temporary ponds, sloughs, and in lakes. Clams of the genera Musculium, Sphaerium, and Pisidium occur in lakes and streams, while the larger clams are generally restricted to rivers. The easiest way to find mollusks is to beachcomb along the margins of lakes and streams. They can be kept by storage in small boxes or vials. The soft parts should be removed if present. With clams this can be done with a knife, however, with snails one should boil the specimen for about a minute and then draw out the soft parts with a needle. Habitat and location data should accompany all collections.

Fourteen snails and six clams are included. Most species are easy to determine, however, trouble may arise in separating Gyraulus similis from G. parvus, and Helisoma trivolvis from H. subcrenatum. Identification of species is difficult or impossible within the genera Musculium, Sphaerium, and Pisidium (Brooks and Herrington, 1944), and for this reason the key goes only to genus in these cases. The conservative treatment of Hubendick (1951) has been followed in the recognition of only 3 species in the genera Lymnaea and Stagnicola.

The mollusks of the region are listed and their ecology discussed in Mozley (1937, 1938). A complete listing of the recent Canadian mollusca can be found in La Rocque (1953).

1. Animals covered by a single shell -- Gastropoda (snails).
  2. Shell discoidal, i.e. lacking a spire.
    3. Shell without teeth in the interior of the aperture.
      4. Shell less than 9 mm wide.
        5. Whorls rounded in cross-section.
          6. Whorls without transverse ridges.
            7. Shell 1.7 mm or more high, 4.7 mm or more wide; aperture roundish; lower surface not reamed out (Fig. 1) ----- Gyraulus similis
            7. Shell smaller; aperture not as round; lower surface with a reamed out appearance ----- Gyraulus parvus

6. Whorls with transverse ridges  
(Fig. 2) ----- Gyraulus crista
5. Whorls with a ridge around the outside.
8. Shell with a prominent, acute  
ridge (Fig. 3) ----- Promenetus exacuus
8. Shell with a weakly developed  
ridge ----- Promenetus umbilicatellus
4. Shell more than 12 mm wide.
9. Riblets 1-3 or fewer per mm on  
last whorl (Fig. 4) ----- Helisoma subcrenatum
9. Riblets 3-5 per mm on last whorl ----- Helisoma trivolvis
3. Shell with teeth in the interior of  
the aperture (Fig. 5) ----- Planorbula campestris
2. Shell with a spire, elongated, not discoidal.
10. Shell lacking spiral ridges.
11. Shell right-handed, i.e., aperture on the right-  
hand side when held with spire upright.
12. Shell small to medium sized, body whorl  
little inflated.
13. Fresh specimens covered with fine  
hairs ----- Stagnicola caperata
13. Fresh specimens not hairy  
(Fig. 6) ----- Stagnicola palustris
12. Shell large, body whorl inflated  
(Fig. 7) ----- Lymnaea stagnalis
11. Shell left-handed.
14. Body whorl little inflated; mouth  
of aperture not red (Fig. 8) ----- Aplexa hypnorum
14. Body whorl inflated; thickened  
area on inner margin of aperture  
bordered by red (Fig. 9) ----- Physa gyrina
10. Shell with three spiral ridges (Fig. 10) ----- Valvata tricarinata

1. Animals covered by two opposing shells -- Pelecypoda (clams).
  15. Shells small, without mother-of-pearl -- Sphaeriidae.
    16. First-formed shells not distinct from the rest of the shells; 2 teeth in each valve.
      17. Shell equilateral, beaks nearly central (Fig. 11) ----- Sphaerium spp.
      17. Shells with anterior side longer, not equilateral; beaks not central (Fig. 12) ----- Pisidium spp.
    16. Adult shells with first-formed shells still noticeable; valve teeth minute or lacking (Fig. 13) ----- Musculium spp.
  16. Shells large, with mother-of-pearl -- Unionidae.
    18. Hinge with one set of teeth, or with teeth lacking; non-weathered shells dark brown or blackish on the outside.
      19. Hinge with one set of teeth; shell thick, not fragile (Fig. 14) ----- Lasmigona complanata
      19. Hinge lacking teeth; shell thin, fragile (Fig. 15) ----- Anodonta grandis
    18. Hinge with two sets of teeth; non-weathered shells yellowish on the outside with green rays radiating out from the beak (Fig. 16) ----- Lampsilis luteola

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GASTROPODA (SNAILS)

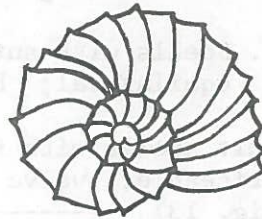
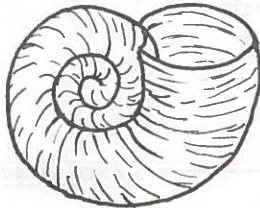
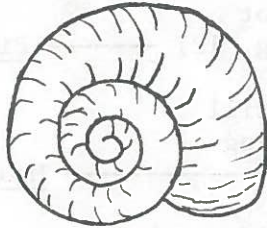


Fig. 1. Gyraulus similaris (x 20).

Fig. 2. Gyraulus crista (x 10).

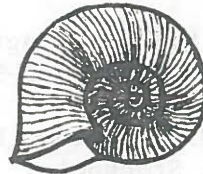
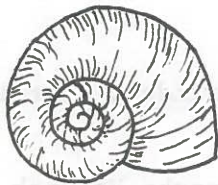


Fig. 3. Promenetus exacuous (x 15).

Fig. 4. Helisoma subcrenatum (x 2).

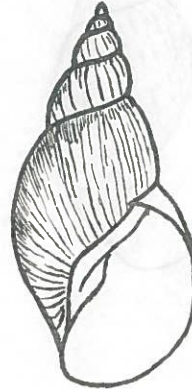
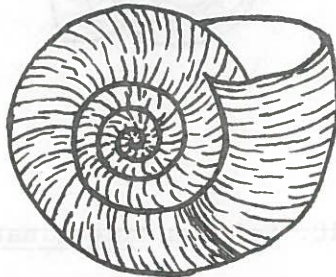
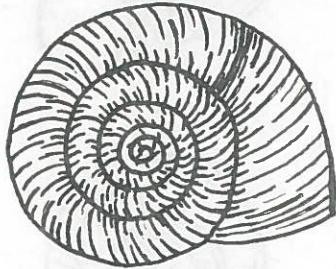
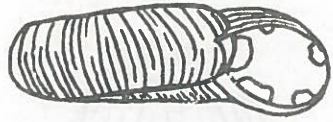


Fig. 5. Planorbula campestris (x 4). Fig. 6. Stagnicola palustris (x 2).

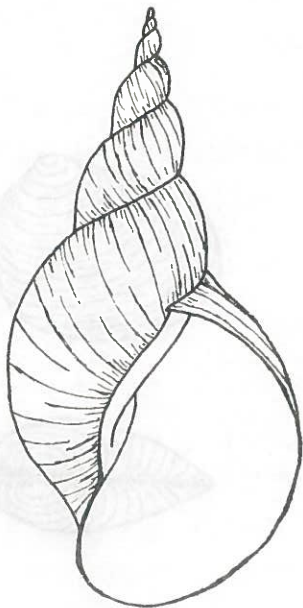


Fig. 7. Lymnaea stagnalis (x 2).

Fig. 8. Aplexa hypnorum (x 3).

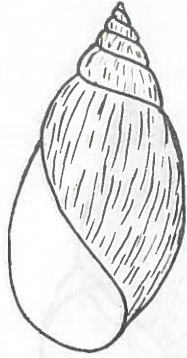


Fig. 9. Physa gyrina (x 4).

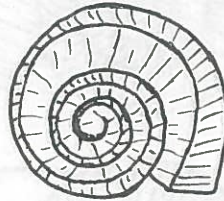


Fig. 10. Valvata tricarinata (x 15).

PELECYPODA (CLAMS)

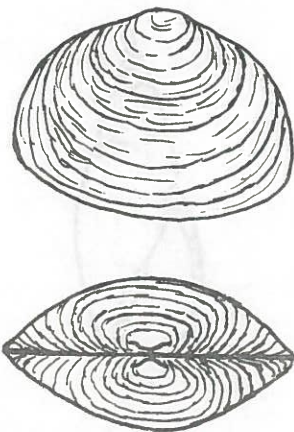


Fig. 11. Sphaerium sp. (x 5).

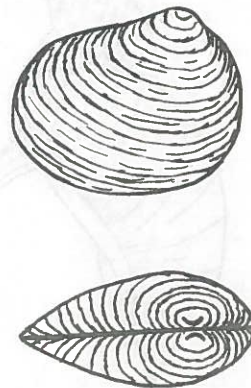


Fig. 12. Pisidium sp. (x 4).

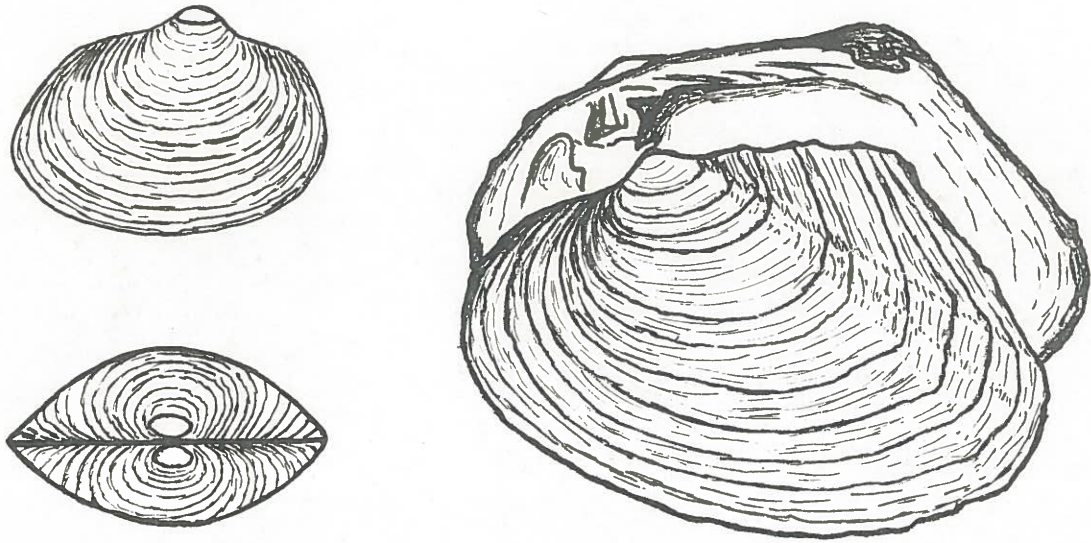


Fig. 13. Musculium sp. (x 4).      Fig. 14. Lasmigona complanata (x 0.7).

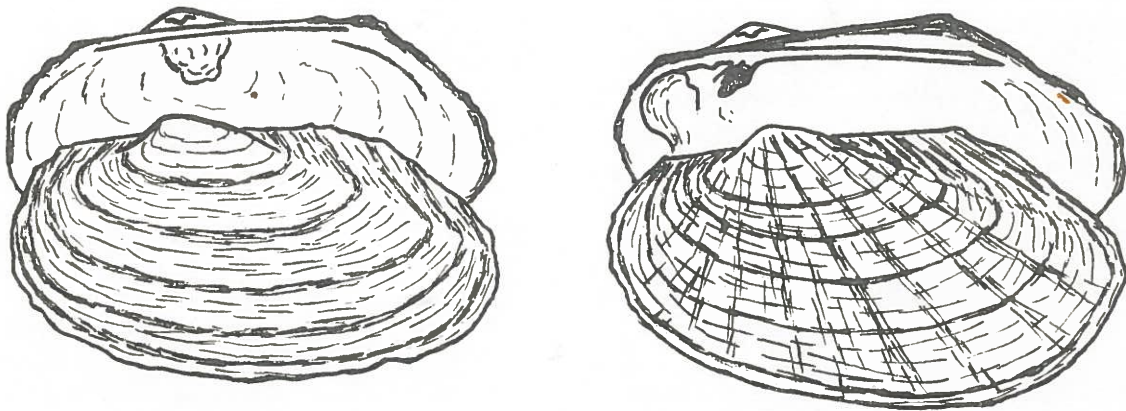


Fig. 15. Anodonta grandis (x 1).      Fig. 16. Lampsilis luteola (x 1).