

KEY TO MOLLUSK IDENTIFICATION
 (Species in Grabau's 1898/99 Book unless indicated by *)
 - Dr. Rick Batt, 1998

GASTROPODS

1.	a.	Shell planispiral	2
	b.	Shell trochospiral	4
2.	a.	Rapid expansion	3
	b.	Gradual expansion	<u>Sinuitina</u> *
3.	a.	Concentric growth lines	<u>Ptomatis patulus</u>
	b.	Strong revolving striae, central band ...	<u>Retispira leda</u>
4.	a.	Whorls separated at least later	5
	b.	Whorls remain in contact	12
5.	a.	Very gradual expansion	<u>Straparollus laxus</u>
	b.	Rapid expansion	6
6.	a.	Apex pointed, no coil	<u>Orthonychia</u> *
	b.	Relatively tiny initial whorls	7
7.	a.	Apex minute	8
	b.	Apex slightly larger, closely inrolled	9
8.	a.	Irregular, longitudinal folds	<u>Platyceras attenuatum</u>
	b.	Strong carination (projecting ridge)	<u>P. carinata</u>
9.	a.	Body whorl relatively straight; shell "tall"	10
	b.	Body whorl curved	11
10.	a.	Body whorl expands rapidly	<u>Platyceras erectum</u>
	b.	Gradual expansion	<u>Platyceras thetis</u>
11.	a.	Nearly planispiral, concentric striae	<u>Platyceras symmetricum</u>
	b.	Rounded longitudinal folds	<u>Platyceras bucculentum</u>
12.	a.	Shell very high-spined	13
	b.	Shell low- to intermediate-spined	14
13.	a.	12-13 whorls, whorls bulge	<u>Palaeozygopleura hamiltoniae</u>
	b.	7-8 whorls, suture band	<u>Palaeozygopleura delphicola</u>
14.	a.	Spire very low, may be depressed	<u>Straparollus rudis</u>
	b.	Spire low to intermediate	15
15.	a.	Spiral band on periphery	16
	b.	No spiral band	<u>Naticonema lineata</u>
16.	a.	Concentric growth lines only	<u>Euryzone rugulata</u>
	b.	Revolving ornament	17

- 17. a. Ornament fine, revolving and concentric 18
- b. prominent revolving carinae 19
- 18. a. Larger, sub-globose, low-spined Mourlonia lucina
- b. Shell turbinate, higher-spined Euryzone itylus
- 19. a. Higher spined, several revolving carinae crossed by
 concentric striae Glyptotomaria capillaria
- b. Low spined; strong, widely-spaced carinae
 "Bembexia" planidorsalis

PELECYPODS

- 1. a. Hingeline straight or nearly so, with flattened
 anterior "ear," posterior "wing" 2
- b. Hingeline does not have both ear and wing 13
- 2. a. Ear and wing subequal; shell scallop-like 3
- b. Ear much smaller than wing; shell like pearl oyster 5
- 3. a. Wing extends less than halfway to posterior end;
 beak rounded Pseudaviculopecten princeps
- b. Wing extends at least halfway to posterior end 4
- 4. a. Shell nearly equidimensional; beak pointed
 Pseudaviculopecten exacutus
- b. Shell long (front to back); hinge extends most of
 length "Pterinopecten" insignis
- 5. a. Ear non-distinct; wing blends into shell; nearly
 circular outline Lyriopecten orbiculatus
- b. Wing prominent 6
- 6. a. Ornament on both valves concentric only 7
- b. Radiating ornament at least on one valve 8
- 7. a. Shell higher than wide Leiopteria rafinesqui
- b. Shell wider than high Leiopteria conradi
- 8. a. Shell high; posterior wing large, well-defined;
 strong rays Cornellites fasciculata
- b. Shell equidimensional or wider than high 9
- 9. a. Shell nearly equidimensional; beak nearly central .. 10
- b. Shell wider than high 11
- 10. a. Numerous sharp radiating striae; prominent concentric
 undulations Pterinopecten undulosus
- b. Radiating striae, few widely-spaced concentric striae
 Pterinopecten conspectus
- 11. a. Beak only slightly anterior of center to 1/3 from
 center Pterinopecten hermes

	b.	Beaks close to anterior end	12
12.	a.	Shell signif. wider than high; right valve w/radiating and concentric striae	<u>Actinopteria decussata</u>
	b.	Shell more nearly equidimensional ..	<u>Actinopteria boydi</u>
13.	a.	Shell height greatly exceeds length	14
	b.	Shell equidimensional or signif. longer than high ..	15
14.	a.	Smooth, with ovate outline; tiny posterior wing	<u>Mytilarca oviformis</u>
	b.	Smooth, sub-triangular; truncated anterior, extended posterior	<u>Gosselettia retusa</u>
15.	a.	Shell nearly equidimensional	16
	b.	Shell longer than high	21
16.	a.	Shell smooth or with concentric ornament	17
	b.	Shell with radiating ornament	20
17.	a.	Ventral margin round	18
	b.	Shell small, angular	19
18.	a.	Shell nearly circular	<u>Paracyclas rugosa</u>
	b.	Hingeline pointed to straight ...	<u>Pterochaenia fragilis</u>
19.	a.	Shell nearly rectangular	<u>Nuculites nyssa</u>
	b.	Shell sub-triangular	<u>Nuculites triqueter</u>
20.	a.	Shell nearly circular	<u>Glyptocardia speciosa</u>
	b.	Beak area narrow	<u>Lunulicardium curtum</u>
21.	a.	Beak at or close to anterior end	22
	b.	Beak near center of dorsal margin, shell somewhat rectangular	<u>Tellinopsis subemarginata</u>
22.	a.	Shell becomes significantly higher behind beak	23
	b.	Shell height does not increase signif. behind beak .	29
23.	a.	Beak at anterior edge	24
	b.	Beak behind narrow anterior lobe	25
24.	a.	Pronounced umbonal ridge ...	<u>Goniophora modiomorphoides</u>
	b.	Shell small, no ridge	<u>Modiella pygmaea</u>
25.	a.	Beak projects above long straight hingeline	<u>Gramatodon hamiltoniae</u>
	b.	Anterior lobe slopes downward from beak	26
26.	a.	Shell small; strong widely-spaced concentric undulations	<u>Cypricardinea indenta</u>
	b.	Closely-spaced fine growth-lines	27
27.	a.	Shell significantly longer than high	28

- b. Shell behind beak more equidimensional, deeper
..... Modiomorpha mytiloides
- 28. a. Shell larger; no umbonal ridge Modiomorpha concentrica
b. Shell smaller; well-marked umbonal ridge .. M. subalata
- 29. a. Shell tapers toward narrow posterior end 30
b. Posterior end broad, angular or rounded 33
- 30. a. Ventral marginal constriction 31
b. No ventral marginal constriction 32
- 31. a. Shell small; fine growthlines ... Paleoneilo constricta
b. Strong umbonal ridge; widely-spaced concentric lines
..... Paleoneilo emarginata
- 32. a. Shell small, beak about 1/3 back from anterior end
..... Nuculoidea corbuliformis
b. Shell small, long; beak closer to anterior
..... Nuculites oblongatus
- 33. a. Posterior end broadly angular 34
b. Posterior end broadly rounded 39
- 34. a. Shell more than twice as long as high 35
b. Shell less than twice as long as high 37
- 35. a. No umbonal ridge; elevated concentric striae
..... Paleoneilo muta
b. Umbonal ridge present 36
- 36. a. Umbonal ridge strong; beak pointed Sphenotus truncatus
b. Beak broadly rounded; shell very long Orthonota parvula
- 37. a. Beak pointed 38
b. Beak rounded; radiating lines Pholadella radiata
- 38. a. Prominent anterior lobe; angular growthlines
... Cypricardella bellastrata
b. Anterior lobe not prominent, fine growthlines
..... Paleoneilo filosa
- 39. a. Strong concentric undulations 40
b. Fine concentric ornament 41
- 40. a. No umbonal sulcus Grammysioidea arcuata
b. Umbonal sulcus Grammysia *
- 41. a. Sl. notch in posterior edge Cypricardella tenuistriata
b. No notch 42
- 42. a. Posterior end more narrowly rounded ... Eoschizodus sp.
b. Posterior end broadly rounded ... Glossites nuculoides