ECOLOGICAL DATA -- 1. LATCHFORD'S NOTES ON ELLIPTIO COMPLANATUS (DILLWYN).

The following information was published by F. R. Latchford (1882, Trans. Ottawa Field-Nat. Club, I, No. 3: 49) nearly 80 years ago. It is reproduced here with annotations in order to make it more accessible to malacologists. Its value lies in the acute observation displayed, the time at which it was recorded, and the fact that the localities mentioned are in the northern part of the range of the species. The geology of the area is well known (see Wilson, 1946, Geol. Survey of Canada, Mem. 241, especially maps 413A and 414A). The writer revisited some of the localities mentioned 25 or 30 years ago and can vouch for the accuracy of Latchford's data. The annotations (indicated by capital letters in parentheses) will help the reader find the various localities mentioned and supply additional pertinent information. Latchford's notes are reproduced in the following excerpt from the paper mentioned above.

"UNIO COMPLANATUS Sol. Rideau R. (A) everywhere, Ottawa R. above the Chaudière Falls (B). In company with the typical form, I found near Skead's Mills (C), in 1880, a specimen of a small variety. Although presenting every appearance of maturity, it is only an inch in height by two and a half in length. For its size it is very thick and regularly inflated. I am informed that a similar variety occurs in some streams in Western New York. A form almost as small is found in the cold and limpid waters of Meech's Lake (D). But it is a thin and not a thick shell; not inflated but depressed. Its colour is a very light brown. About half a mile from Meech's Lake, on the creek through which it finds an outlet, are a few shallow ponds, with a bottom of coarse sand and gravel washed down from the surrounding hills. In the warmer water of these ponds, where food also must be more abundant, U. complanatus is three times as large as in the neighbouring lake. It differs moreover in being proportionately less depressed, and more equally rounded at both extremities. Its colour is a rich dark brown with a silken lustre, and, not unfrequently, a tinge of bright orange along the umbonal slope.

"Near Kettle Island (E) there occurs a form of much interest on account of its curious angular inflation. How extraordinary this is for a species whose most constant characteristic is its flatness, may be inferred from the fact that a representative specimen whose height is 1.6 in. measures 1.5 in. in diameter. The inflation is greatest near the dorsal margin behind the hinge-ligament, where a section of the shell would be an almost perfectly equilateral triangle with the base and the angles at the base slightly rounded. A specimen found by Mr. Poirier is 3 in. high 4.9 long, and weighs only 3 oz. (F).

"At the same locality is found a still more remarkable variety and one of no little beauty. In some respects it resembles U. Raleighensis Lea from North Carolina and in others U. tortuosus Sowby from Maryland. It is like the former in shape and in the numerous prominent rays which diversify its surface; and like the latter in the strange peculiarity that its valves meet at the ventral margin not in a straight but in a sinuous line. A correspondent writes that under Dr. Lea's treatment it would be entitled to rank as a species. Whether a variety of U. complanatus or a distinct species, it is a most unique and interesting shell."

(A) Rideau River: a north-flowing tributary of the Ottawa, part of which was incorporated into the Rideau Canal in the 1830s. The canal joined the Ottawa with the east end of Lake Ontario at Kingston, Ontario. For an account of the Rideau Canal, see Robert Legget's "Rideau Waterway" (1955, U. of Toronto Press, xiv + 249 pp., illus., incl. maps).

(Continued p. 32)

PRELIMINARY CHECKLIST OF LAKE BONNEVILLE MOLLUSCA

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The existence of an ancient lake in the Bonneville Basin of western Utah was first recognized, on physical evidence alone, by Howard Stansbury in 1849. Some ten years later the first observation on fossil mollusks from deposits of this lake was made by Henry Engelmann although publication of his observations was delayed until 1876. In the meantime, F. V. Hayden made a small collection and prepared an account of it for his report of 1872, thus getting credit for the first published report of Bonneville fossil mollusks.

Intensive investigation of the Bonneville problem began with G. K. Gilbert whose studies culminated in the classic monograph on Lake Bonneville published by the U. S. Geological Survey in 1890. The molluscan material obtained by Gilbert was submitted to R. E. Call for identification. Call's studies on the Bonneville fossils were included in a report on the Pleistocene and Recent mollusks of the entire Great Basin published by the U. S. Geological Survey in 1884. There has been no review of the Bonneville fauna since that date.

I am indebted to Dr. Dwight W. Taylor, U. S. Geological Survey, for critical reading of the manuscript and for information on certain forms not reported in the literature but present in the Survey collection in Washington, D. C. Both Dr. Taylor and I are cognizant of the tentative nature of some of these determinations; responsibility for inclusion in the present list rests solely with the author. Its chief value will probably lie in the consolidation of the widely scattered literature. Criticisms and suggestions are earnestly solicited from all interested persons.

The checklist is arranged in general accordance with the plan outlined by La Rocque in a previous number (Sterkiana, 1: 19-22). References are given only to those papers in which Lake Bonneville mollusks are reported. Synonymy is not given here but can be reconstructed from the references cited.

1. NAIADES

Margaritiferidae

1. MARGARITIFERA MARGARITIFERA (Linné) 1758. Call 1884: 14; Henderson 1924: 88-89; Chamberlin and Jones 1929:29.

Unionidae

?2. ANODONTA CALIFORNIENSIS Lea 1852. Henderson 1931b: 109-113.

3. ANODONTA NUTTALLIANA Lea 1838. Call 1884: 14-15; ?Hannibal 1912: 126, 197, 203; Henderson 1924: 85; Chamberlin and Jones 1929: 19, 23, 26; Henderson 1936: 82; Christensen 1950: 107.

4. ANODONTA OREGONENSIS Lea 1838. ?Hannibal 1912: 126, 197, 203; Chamberlin and Jones 1929: 23-25; Henderson 1936: 82.

5. ANODONTA (SP.). Eardley and Gvosdetsky 1960: 1336-1338.

2. SPHAERIIDAE

6. PISIDIUM COMPRESSUM Prime 1851. Henderson 1931b: 109-113; Herrington and Roscoe 1953: 98.

7. PISIDIUM (SP.). Eardley and Gvosdetsky 1960: 1336-1338.

?8. SPHAERIUM DENTATUM (Haldeman) 1841. Call 1884: 15; Henderson 1924: 91.

9. SPHAERIUM PILSBRYANUM Sterki 1909. Sterki 1909: 141; Sterki 1916: 437; Chamberlin and Jones 1929: 32; Henderson 1931b: 109-113; Berry and Crawford 1932: 53-54; Hunt, Varnes, and Thomas 1953: 25.

10. SPHAERIUM STRIATINUM (Lamarck) 1818. Boutwell 1904: 471-472; Eardley and Gvosdetsky 1960: 1336-1338.

11. SPHAERIUM (SP.). Engelmann, in Simpson 1876: 313; Eardley and Gvosdetsky 1960: 1336-1338.

3. FRESHWATER PULMONATA

Physidae

12. APLEXA HYPNORUM (Linné) 1758. U. S. G. S. collections.

?13. PHYSA AMPULLACEA Gould 1885. Henderson and Daniels 1917: 58; Chamberlin and Jones 1929: 159-162; Henderson 1931b: 109-113; Berry and Crawford 1932: 53-54; Hunt, Varnes, and Thomas 1953: 25.

?14. PHYSA GYRINA Say 1821. Call 1884: 18; Stearns 1901: 293; Henderson 1924: 184.

?15. PHYSA HETEROSTROPHA (Say) 1817. Gilbert 1875: 100; Yarrow 1875: 938; Call 1884: 18; Stearns 1901: 288; Henderson 1924: 185.

?16. PHYSA LORDI Baird 1863. Call 1884: 19; Henderson 1924: 185; Hunt, Varnes, and Thomas 1953: 25.

17. PHYSA (SP.). Eardley and Gvosdetsky 1960: 1336-1338.

Lymnaeidae

?18. LYMNAEA AURICULARIA (Linné) 1758. Hannibal 1912: 140-141; Henderson 1924: 163.

19. LYMNAEA BONNEVILLENSIS (Call) 1884. Call 1884: 24, 28; Call 1886: 6; Gilbert 1890: 219, 298; Stearns 1901: 291; Baker 1911: 105; Henderson 1924: 163; Chamberlin and Jones 1929: 135; Henderson 1936: 117; Hasler and Crawford 1938: 25-26; Ives 1946: 195-199; Ives 1951: 787.

20. LYMNAEA CAPERATA Say 1829. Eardley and Gvosdetsky 1960: 1336-1338.

?21. LYMNAEA CATASCOPIUM Say 1817. Hayden 1872: 170; Henderson 1924: 163.

22. LYMNAEA COCKERELLI (Pilsbry and Ferriss) 1906. Eardley and Gvosdetsky 1960: 1336-1338.

23. LYMNAEA DALLI (Baker) 1906. Eardley and Gvosdetsky 1960: 1336-1338.

?24. LYMNAEA DESIDIOSA Say 1821. Hayden 1872: 170; Gilbert 1875: 99, 100; Yarrow 1875: 994; Henderson 1924: 167.

25. LYMNAEA HUMILIS Say 1822. Stearns 1893: 275; Henderson 1924: 167.

26. LYMNAEA KINGI (Meek) 1876. Chamberlin 1933: 97-100; Henderson 1924: 124; Berry and Crawford 1932: 53-54.

27. LYMNAEA MODICELLA Say 1825. Chamberlin and Jones 1929: 138.

28. LYMNAEA OBRUSSA Say 1825. Chamberlin and Jones 1929: 141-143.

29. LYMNAEA PALUSTRIS (Müller) 1774. Call 1884: 17; Gilbert 1875: 100; Yarrow 1875: 943; Henderson 1924: 168-169; Henderson 1931b: 109-113; Chamberlin and Jones 1929: 128-133; Berry and Crawford 1932: 53-54; Eardley and Gvosdetsky 1960: 1336-1338.

30. LYMNAEA PROXIMA Lea 1856. Henderson and Daniels 1917: 58.

31. LYMNAEA STAGNALIS APPRESSA (Say) 1818. Call 1884: 17; Baker 1911: 146, 147; Hannibal 1912: 140; Henderson 1924: 161; Chamberlin and Jones 1929: 123.

?32. LYMNAEA SUMASSI Baird 1863. Call 1884: 18; Henderson 1924: 169.

33. LYMNAEA UTAHENSIS (Call) 1884. Call 1884: 373, 379, 381; Call 1886: 5; Gilbert 1890: 291; Stearns 1901: 291; Sterki 1909: 142; Baker 1911: 458; Henderson 1924: 173; Chamberlin and Jones 1929: 143-144; Henderson 1931a: 77-79; Henderson 1931b: 109-113; Berry and Crawford 1932: 53-54; Henderson 1936: 124; Hunt, Varnes, and Thomas 1953: 23.

34. LYMNAEA (SP. or SPP.). Engelmann, in Simpson 1876: 313; Berry and Crawford 1932: 53-54; Crawford and Chorney 1944: 135-138; Eardley and Gvosdetsky 1960: 1336-1338.

Planorbidae

35. ARMIGER CRISTATA (Linné) 1758. Eardley and Gvosdetsky 1960: 1336-1338.

?36. CARINIFEX ATOPUS Chamberlin and Jones 1929. Chamberlin and Jones 1929: 156-157; Henderson 1931: 77-79.

37. CARINIFEX NEWBERRYI (Lea) 1858. Gilbert 1875: 100; Yarrow 1875: 946; Ingersoll 1877: 132; Stearns 1883: 277; Sterki 1909: 142; Henderson 1924: 181; Chamberlin and Jones 1929: 155-156; Henderson 1931a: 44-79; Henderson 1931b: 109-113; Hunt, Varnes, and Thomas 1953: 25.

38. CARINIFEX (SP.). Berry and Crawford 1932: 53-54.

39. GYRAULUS CIRCUMSTRIATUS (Tryon) 1866. Eardley and Gvosdetsky 1960: 1336-1338.

40. GYRAULUS PARVUS (Say) 1817. Henderson and Daniels 1917: 50; Eardley and Gvosdetsky 1960: 1336-1338.

41. GYRAULUS VERMICULARIS (Gould) 1847. Henderson 1931b: 109-113; Berry and Crawford 1932: 53-54.

42. GYRAULUS (SP.). Eardley and Gvosdetsky 1960: 1336-1338.

43. HELISOMA SUBCRENATUM (Carpenter) 1856. U. S. G. S. collections.

44. HELISOMA TRIVOLVIS (Say) 1817. Yarrow 1875: 947; Call 1884: 16; Henderson 1924: 174; Chamberlin and Jones 1929: 146-147; Berry and Crawford 1932: 53-54.

45. HELISOMA (SP.). Crawford and Chorney 1944: 135-138; Eardley and Gvosdetsky 1960: 1336-1338.

46. POMPHOLOPSIS WHITEI Call 1888. Hunt, Varnes, and Thomas 1953: 25.

47. PROMENETUS EXACUOUS (Say) 1821. Henderson 1931b: 109-113; Eardley and Gvosdetsky 1960: 1336-1338.

48. PROMENETUS UMBILICATELLUS (Cockerell) 1887. Eardley and Gvosdetsky 1960: 1336-1338.

Ancylidae

49. FERRISSIA (SP.). Eardley and Gvosdetsky 1960: 1336-1338.

4. FRESHWATER OPERCULATES

Hydrobiidae

50. AMNICOLA CINCINNATIENSIS (Anthony) 1840. Hayden 1872: 170; Call 1884: 20-21; Gilbert 1875: 99; Pilsbry 1899: 122; Hannibal 1912: 101; Henderson and Daniels 1917: 77; Henderson 1924: 190; Chamberlin and Jones 1929: 175-176; Berry and Crawford 1932: 53-54; Wimber and Crawford 1931: 61;

Henderson 1936: 138; Hasler and Crawford 1938: 25-26; Jones 1940: 40.

51. AMNICOLA INTEGRA (Say) 1840. Baily and Baily 1951: 47.

52. AMNICOLA LIMOSA (Say) 1817. Hayden 1872: 170; Hannibal 1912: 185; Henderson 1924: 190; Chamberlin and Jones 1929: 173-174; Berry and Crawford 1932: 53-54.

53. AMNICOLA LONGINQUA Gould 1855. Cooper 1888: 288; Cooper 1892: 23; Henderson 1931b: 109-113; Henderson 1936: 137; Ives 1946: 195-196; Ives 1951: 787; Hunt, Varnes, and Thomas 1953: 23.

54. AMNICOLA PORATA (Say) 1821. Call 1884: 21; Stearns 1893: 278; Henderson 1924: 190.

55. AMNICOLA (SP.). Engelmann, in Simpson 1876: 313; Hague, Arnold, and Emmons 1877: 454; Hunt, Varnes, and Thomas 1953: 25; Eardley and Gvosdetsky 1960: 1336-1338.

?56. FLUMINICOLA COLORADOENSIS Morrison 1940. U. S. G. S. collections.

57. FLUMINICOLA FUSCA (Haldeman) 1847. Hayden 1872: 170; Ingersoll 1877: 133; Call 1884: 21; Stearns 1893: 282; Sterki 1909: 142; Hannibal 1912: 187; Henderson 1924: 192; Chamberlin and Jones 1929: 180-181; Henderson 1931b: 109-113; Berry and Crawford 1932: 53-54; Hunt, Varnes, and Thomas 1953: 23, 25.

58. PALUDESTRINA PROTEA (Gould) 1885. Stearns 1901: 277, 279.

59. POMATIOPSIS LUSTRICA Say 1821. Gilbert 1875: 99.

60. TRYONIA EXIGUA Conrad 1855. Yarrow 1875: 948; Henderson 1924: 191.

Valvatidae

?61. VALVATA CALLI Hannibal 1910. Hannibal 1910: 104, 107; Henderson 1924: 193.

?62. VALVATA HUMERALIS (Say) 1829. Eardley and Gvosdetsky 1960: 1336-1338.

63. VALVATA HUMERALIS CALIFORNICA Pilsbry 1908. Henderson 1931b: 109-113; Berry and Crawford 1932: 53-54.

64. VALVATA UTAHENSIS (Call) 1884. Hayden 1872: 170; Call 1884: 22, 24, 25; Boutwell 1904: 471-472; Hannibal 1910: 23, 104, 106; Henderson 1924: 193; Chamberlin and Jones 1929: 183-184; Henderson 1931b: 109-113; Berry and Crawford 1932: 53-54; Hunt, Varnes, and Thomas 1953: 25; Eardley and Gvosdetsky 1960: 1336-1338.

?65. VALVATA UTAHENSIS HORATII Baily and Baily 1951. Baily and Baily 1951: 50.

?66. VALVATA VIRENS Tryon 1863. Call 1884: 21; Henderson 1924: 193.

5. LAND GASTROPODA

Camaenidae

67. OREOHELIX PERIPHERICA (Ancey) 1881. U. S. G. S. collections.

68. OREOHELIX STRIGOSA DEPRESSA (Cockerell) 1890. Roscoe 1951: 135-136; Hunt, Varnes, and Thomas 1953: 24.

?69. (OREOHELIX SP. or SPP.). Engelmann, in Simpson 1876: 313; Hansen and Stokes 1941: 34.

Zonitidae

70. ZONITOIDES ARBOREUS (Say) 1816. U. S. G. S. collections.

71. ZONITOIDES NITIDUS (Müller) 1774. This specimen, which was determined by me from material submitted by J. H. Feth, cannot be located in the U. S. G. S. collections.

Endodontidae

72. DISCUS CRONKHITEI (Newcomb) 1865. U. S. G. S. collections.

?73. DISCUS CRONKHITEI ANTHONYI Pilsbry 1906. Henderson and Daniels 1917: 58; Henderson 1931b: 109-113.

Valloniidae

74. VALLONIA CYCLOPHORELLA (Ancey) 1890. U. S. G. S. collections.

Pupillidae

75. PUPILLA MUSCORUM (Linné) 1758. U. S. G. S. collections.

76. VERTIGO OVATA (Say) 1822. Henderson and Daniels 1917: 58.

Succineidae

Because of the difficulty, if not impossibility, of determining species in this family from shell features alone, all records are suspect.

?77. SUCCINEA AVARA Say 1824. Hunt, Varnes, and Thomas 1953: 24.

?78. SUCCINEA LINEATA W. G. Binney 1857. Cooper 1870: 199-219; Gilbert 1875: 99.

79. SUCCINEA (SP. or SPP.). Henderson 1931b: 109-113; Eardley and Gvosdetsky 1960: 1336-1338.

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MUSSEL SHOALS VS. MUSCLE SHOALS

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Seldom is malacology concerned with problems of toponymy. There has been one question of long standing, however, which in spite of an official ruling has never been completely settled in the minds of some malacologists. While the famous rapids in the Tennessee River, habitat of abundant river mussels but known officially and most commonly as "Muscle Shoals," are no longer in existence, the name is perpetuated by the hydroelectric plant and by a nearby town bearing the same name. It is interesting to trace the historical development of this name and its relationship to the work and publications of malacologists.

In Alabama: A Guide to the Deep South, (W. P. A. Writers' Project, 1941), the following account of Muscle Shoals is given: "About 1779 the first white rivermen paddled into the region and established a trading post here. They named the rapids Muscle or Mussel Shoals, suggested either by the abundant shellfish or the strong arm muscles required to paddle a boat through the rapids." Apparently from the beginning there was uncertainty as to the actual origin and spelling of the name. The spelling "Muscle Shoals" appeared early in such sources as the Map of Tennessee Government by John Ried in 1795; Winterbothem's American Atlas of 1796; Reports of the Chief of Engineers, U. S. Army, and the Twentieth Congress, First Session, in 1828; the Tennessee Gazetteer by Eastin Morris in 1834; and charts of the Tennessee River made for the U. S. Navy by the Coast Survey, 1864-65. On April 5, 1892, the U.S. Board on Geographic Names, in view of past usage, rendered a decision in favor of "Muscle Shoals." Apparently the spelling "muscle" in reference to bivalve mollusks was common, at least in the Alabama-Tennessee region, during those years. Also it is understandable why non-malacologists responsible for the above mentioned documents, carefully considered by the Board, would naturally think of "muscle" rather than "mussel." Probably but few of them were familiar with the animals now most commonly known as mussels. Even the malacologists of that period usually employed the terms "naiad" or "bivalve" for these mollusks.

Practically all reference sources — dictionaries, atlases, gazetteers, encyclopedias, almanacs, government reports, maps, etc. — published since the Board's decision have used the official spelling of "Muscle Shoals," but not without some hesitation in certain cases. Some list both spellings, but give preference to the official form. The 1914 edition of Funk and Wagnalls New Standard Dictionary of the English Language, for example, listed the rapids under two separate names, "Muscle Shoals" and "Mussel Shoals," but gave preference to the first. Even as

as 1949 the Encyclopedia Britannica states under the entry "Muscle Shoals" that "the first part of the name is probably the obsolete form of mussel." Early writers were divided as to usage. An article published in Harper's Weekly in 1890 was entitled "Mussel Shoals Canal," but was indexed under "Muscle Shoals" as the primary entry and under "Mussel Shoals" as a secondary classification in Reader's Guide to Periodical Literature. Beginning with twentieth century literature, indexing of the Reader's Guide does not again use the classification "Mussel Shoals" with a single exception in volume 7 (Literature published 1925-28), and then only as a synonym of "Muscle Shoals."

It was the eminent malacologist A. E. Ortmann who pleaded in 1924 (Science 60: 565-6) that "the common and now official spelling 'Muscle Shoals' should be discarded for the more correct one 'Mussel Shoals'." Ironically his article, entitled "Mussel Shoals," was catalogued in the Reader's Guide to Periodical Literature under "Muscle Shoals." Ortmann used the spelling which he advocated in his own scientific papers, but strangely enough did not capitalize the name of the rapids. His usual reference to them was stated as "at the mussel shoals near Florence" (Proc. Am. Phil. Soc. 57: 521-626. 1918). A reply to Ortmann by G. H. Mathes ("Muscle Shoals vs. Mussel Shoals." Science 61: 209. 1925.) claimed that the old spelling for bivalves was "muscle shells," so named because of the strong muscles which close the shells. While he calls attention to spellings in old dictionaries and maps as examples, he does not mention any scientific work using such a spelling. Early writers about the region were probably not aware of the difference. Few people in recent times associate bivalve mollusks with the name "muscle." It appears that such a spelling has not been generally applied to bivalves since the 19th century, although certain local exceptions have been reported by Meredith F. Burrill, Executive Secretary of the U. S. Board on Geographic Names. The problem seems to arise from an early spelling on the part of writers not familiar with the existence of the two homonyms or who preferred to use the optional spelling for bivalves. Place names derived from mussels have long been used elsewhere such as Musselburgh, Scotland; Mussel Aa (River), Netherlands; and Musselburg, Canada. In 1924, the U. S. Board on Geographic Names reconsidered the spelling of Muscle Shoals but made no change in the matter.

It is interesting that in several other instances the same confusion has apparently existed. The U. S. Board recognizes the name of a village and a township in Chariton County, Missouri, as Musselfork. In Lippincott's New Gazetteer of 1913, however, they were both listed as "Muscle Fork," while the stream was called "Muscle River." They appear likewise in Lippincott's Pronouncing Gazetteer or Geographical Dictionary of the World edited by Heilprin and Heilprin of 1922. While a creek in Queensland, Australia, is known as "Musselbrook," a town in New South Wales goes under the name of "Musclebrook," according to the Library Atlas of the World (1914). Other confusions have been noted in the following instances. Musselbed Shoal (a light station in Rhode Island), Mussel Point (a point in Texas), and Musselshell River (in Montana) are listed as such in the Sixth Report of the U. S. Geographic Board (1933). The Lippincott volume of 1922 mentioned above lists the "Muscleshell River" of Montana as an alternate spelling of "Mussellshell River." The Encyclopedia Britannica World Atlas (1947) also lists for Montana the village of Musselshell in Musselshell County, through which the river by that name passes. Only "Muscle Shoals" appears under such a spelling in these later two sources. However, James McCormick, a former secretary of the U. S. Board on Geographic Names, cited in 1924 the personal journals of Lewis and Clark who referred in 1805 to the "Muscle Shell River" in their entries of May 20 and 21 to what is now officially known as the Musselshell River. Also, "Mussel Point," Texas, appeared on a U. S. G. S. source as "Muscle Point" according to the Board's records of 1908. In 1909 the postmaster of Providence, Rhode Island, stated that the light station in Narragansett Bay was known as "Musclebed

Shoal Light" and the shoal was called the "Muscle Bed" without known exceptions. At Cape Ann, Massachusetts, a headland was labelled as "Muscle Point" or "Muscle Rocks" on all of the early maps of that region which have been examined. However, the roadway, to this place, which was listed in the Gloucester Directory for the first time in 1925, has always been given as "Mussel Point Road." The recent Lucas maps (1935) of this region spell both the name of the point and of the road as "Mussel." It is interesting that A Geographic Dictionary of Massachusetts by Henry Gannett (1894) used the spelling "Muscle Point" for this headland at Cape Ann, but lists a similar one on Cape Cod as "Mussel Point." There is a similar "Mussel Point" at Pacific Grove, California, but the only reference to this found by the writer is in an article published in THE NAUTILUS (69: 82. 1956). The spelling employed is probably correct according to current usage and the one to be expected in a journal of malacology.

The postmaster at Florence, Alabama, informed the U. S. Board in 1914 that "Muscle Shoals" was the more commonly used spelling in that locality although even at that early date the local press varied in its usage. The War Department engineer at the canal at that time used the spelling "Muscle." About the same time the postmaster at Sheffield, Alabama, reported "Muscle Shoals" as the common form although sometimes the name appeared as "Mussel Shoals." The corporation formed to develop water power used "Muscle Shoals" in its corporate name. An amusing and seemingly incongruous item appears in Henry Gannett's book American Names (1947) which reads "Muscle Shoals -- series of rapids in the Tennessee River .... so named because of the great number of mussels found there." In another reference work (Cram's Modern Reference Atlas of the World, 1931) is recorded a town in Butler County of Alabama by the name of "Mussel." Nowhere else has this been found listed. In its brief existence it may have been unique in escaping the problem which has existed in all other cases involving that name.

Creation of Wilson Dam, completed in 1925 by the Tennessee Valley Authority, destroyed the greater portion of the rapids near Florence but not the controversy over their name. Calvin Goodrich, in his papers on the mollusks of the Tennessee River published in the 30's and 40's, used the official spelling. On the other hand, as late as 1942, J. P. E. Morrison in his study of the shell mounds of the Pickwick Landing Basin in the Tennessee River Valley (Smiths. Inst. Bur. Am. Ethnol., Bull. 129, pp. 339-392. 1942) repeatedly and consistently used the name "Mussel Shoals."

The official spelling of Muscle Shoals, now so widely used and the only official name using "muscle" in reference to river clams, will very likely never be changed, and there is little argument for doing so. However, it will probably always remain a slight irritation to many malacologists to refer to the famous rapids with their once abundant mussel fauna as "Muscle Shoals."

My thanks go to Dr. Hallock F. Raup, Head, Department of Geography and Geology of Kent State University and Meredith F. Burrill, Executive Secretary of the U. S. Board on Geographic Names, for assistance in tracing the ramifications of this controversy.

ECOLOGICAL DATA -- 1. (Continued from page 22)

(B) Chaudière Falls, within the city of Ottawa, are a major barrier to migration of Mollusca. Naiades may have reached that part of the Ottawa River above the Falls as parasites on fish able to scale the Falls or, during late Pleistocene time, when the Ottawa served as an outlet for the upper Great Lakes. The problem is an interesting one that will bear further investigation.

(C) Skead's Mills was on the Ontario shore of the Ottawa River just above the Chaudière Falls. The mills have long since been razed.

(D) Meach Lake is the presently accepted spelling. The writer studied its molluscan fauna (1935, Can. Jour. Res., 13 (D): 45-59). The lake lies some 20 miles north of Ottawa. It is one of several in a chain drained by a tributary of the Gatineau River, itself a tributary of the Ottawa.

(E) Kettle Island is in the Ottawa River just east of the outlet of the Gatineau River. It is surrounded by shallow sandy areas abundantly populated by Naiades in Latchford's day but later (1935 to 1945, perhaps earlier) polluted by mill waste which destroyed the Naiades. The Naiades, including Elliptio complanatus, were still abundant farther downstream when I collected there some 15 or 20 years ago.

(F) There may be some connection between the disparity in size of the shells of Meach Lake and Kettle Island and the geology of the two areas. The basin of the Meach Lake drainage consists of Precambrian igneous-metamorphic rocks poor in calcium carbonate, partly covered by glacial drift, whereas the Ottawa River flows over both Precambrian rocks of the same nature and Ordovician limestones. For example, the lip of the Chaudière Falls is made up of Ordovician limestones as are the rocky headlands on the south shore of the Ottawa River above Kettle Island (see maps 413A and 414A, in Wilson, 1946, cited above). Caution must nevertheless be exercised in reaching such conclusions because the Kettle Island locality was especially favored in another respect: it was just far enough below the sewage outlet on the Ottawa side of the river to provide abundant microscopic food, yet not near enough to it to cause heavy pollution beyond the tolerance of the Naiades.

A. La Rocque