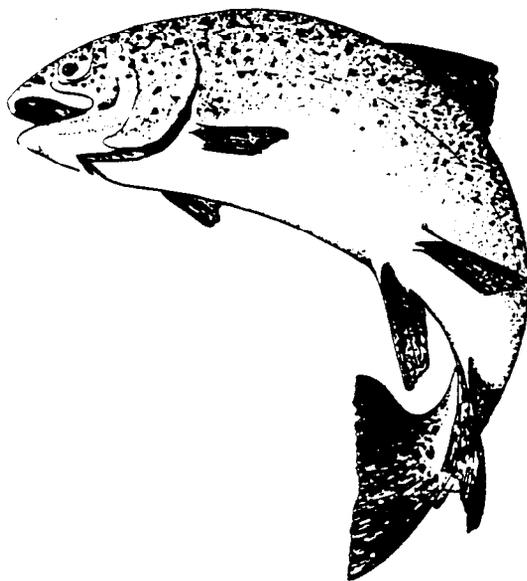


AN ANNOTATED BIBLIOGRAPHY OF BURBOT
(*Lota lota*) WITH EMPHASIS ON STUDIES
CONDUCTED ON NORTHERN AND ALASKAN
BURBOT STOCKS

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ABSTRACT

In response to greatly increased sport harvest of burbot (*Lota lota* Linnaeus) in Alaska, the Department of Fish and Game initiated research on the naturally occurring burbot stocks in interior and southcentral Alaska. To clarify the status of present knowledge of burbot biology, a worldwide literature search on the genus *Lota* was performed. This bibliography is the result of that literature search. A total of 599 primary and secondary references were obtained using several computer literature search facilities as well as library searches. References available after May, 1987 are not included in this bibliography. Since the major focus of this bibliography was to review burbot population biology, fisheries, and life history information, many references dealing only with biochemical research were omitted. Key words are listed for each reference, and a key word index is presented. A short annotation is also provided for each article that the author reviewed.

INTRODUCTION

Statewide harvests of burbot (*Lota lota* Linnaeus) in Alaska have more than tripled since 1977 (Mills 1986). Concern that increasing harvests would affect burbot populations prompted the Alaska Department of Fish and Game (ADF&G) to initiate major new studies of burbot in Alaska. Increased availability of Federal Aid in Fish Restoration monies (Dingell-Johnson Act and Wallop-Breaux Amendment) provided the funding base for new studies including: a population study of lake resident burbot in the interior and southcentral Alaska; Tanana River burbot population studies; and a worldwide literature review of burbot research.

This bibliography presents 599 scientific and popular publications and references on the genus *Lota*. All primary sources, either on file in the Fairbanks office of the ADF&G, or found through the various searching mechanisms noted below, are included through 1 May 1987. Secondary sources, those cited in the primary papers above, are also included. References dealing with strictly biochemical research on burbot were often deleted when it was felt their content strayed from practical fisheries application. Omissions and errors no doubt occurred and the author gratefully accepts any criticism or additions to the content of this paper. These errors may have particularly occurred in citing and annotating secondary and informally written papers and popular articles. However, it was felt that exclusion of questionable material would be best left to the user for fear of eliminating potentially valuable material.

METHODS

Several sources for references of burbot literature were accessed during the preparation of the bibliography. Material from DIALOG Information Services, Inc., was the most comprehensive. Through this commercial online computer information retrieval service, several databases were

accessed with the key words burbot or *Lota lota*. These databases included: 1) the BIOSIS PREVIEWS file, which contained citations from Biological Abstracts, Biological Abstracts/Reports, reviews, meetings, BioResearch Index, the major publications of BioSciences Information Service from 1969 to March 1987; 2) the OCEANIC ABSTRACTS database, which contained citations on worldwide marine-related subjects from 1964 to February 1987; 3) the AQUATIC SCIENCES AND FISHERIES ABSTRACTS (ASFA) database on life sciences of the seas and inland waters which contained primary journals and books, proceedings, and technical research reports from 1978 to March 1987; 4) the DISSERTATION ABSTRACTS ONLINE database which contains American, as well as Canadian, and other foreign dissertations dealing with fisheries and other subject matters.

The Fish and Wildlife Reference Service, operated by Informatics General Corporation under contract with the U.S. Fish and Wildlife Service, Division of Federal Aid, was also utilized to obtain burbot references. This computerized information retrieval system provides access to selected technical reports generated by the Federal Aid in Fish and Wildlife Restoration Program, the Anadromous Sport Fish Conservation Program, and the Cooperative Fishery and Wildlife Research Units. These reports included both unpublished and published articles, monographs, theses, and dissertations.

Considerable material was retrieved from a database search of the Sport Fishery Abstracts files, a quarterly publication of the Editorial Section, Office of Information Transfer, U.S. Fish and Wildlife Service. Several Canadian databases were searched. Those included ASTIS: Arctic Science and Technology Citations and Abstracts, Boreal Institute - Northern Titles Database, and an Environmental Database. Additional Canadian fisheries publications were obtained through the Alaska Department of Fish and Game Juneau library staff who requested burbot information from the seven Canadian Fisheries agencies and searched their various publication indexes and technical reports. The University of Alaska's Cooperative Fisheries Research Unit provided copies of two student-generated burbot literature searches that provided a sound base for this bibliography. Manual searches by name and subject were also conducted by the author in the Regional Fish and Game library in Fairbanks, and at both the University of Alaska's general library and Institute of Arctic Health Biomedical library in Fairbanks.

All suitable sources were typed on a personal computer by the author in a format compatible with the commercially licensed Martz-BIBLIOFILE software. Entering format fields consisted of author(s), date, title, reference source, annotation, and applicable key words. The style format for the citations follows the CBE Style Manual 5th ed., with consistent exceptions as required by the author.

Whenever possible, serial sources were not abbreviated and format followed the style recommended in the SERIAL SOURCES FOR THE BIOSIS DATA BASE, Vol. 1987. Webster's Ninth New Collegiate Dictionary (1984) was consulted for spelling. Annotations are brief and contain the minimum of content description necessary to characterize the citation. Citations that were

not reviewed are so noted and generally consisted of ambiguous secondary references. Key words were assigned according to following citation content criteria for burbot:

- Age and Growth - Presents age, weight, and length data.
- Behavior - Describes habits and behavior patterns.
- Capture Methods - Sampling gear and methods of fish capture.
- Classification - Taxonomic keys to species classification.
- Feeding - Food gathering methods and digestion.
- Geographic Distribution - Citation noting geographic location or presence.
- Harvest - Contains sport, subsistence, or commercial harvest statistics.
- Hatchery Culture - Describes artificial propagation and rearing.
- Management - Describes population assessment and harvest recommendations.
- Morphology - Presents physical body parameters.
- Movements - Contains spatial and temporal location, movements, and migrations.
- Parasites and Disease - Describes infestations and disease.
- Physiology - Biochemical, neurological and physical parameters.
- Population Dynamics - Contains data on dynamic population rates.
- Reproduction - Describes spawning and early life history.
- Species Description - Contains a general species review.
- Utilization - Describes utilization by harvesters and other fish species.

When the citation was either not available or only cited in primary sources, a key word was assigned that characterized the content as stated in the primary report or as intimated by the title. Such key words may be limited in their accuracy of content description. Whenever possible, copies of publications cited in this bibliography were obtained and are on file at the Fairbanks office of the Alaska Department of Fish and Game, Sport Fish Division, 1300 College Road, Fairbanks, Alaska 99701.

BIBLIOGRAPHY

1. Ackman, R. G. 1967. Characteristics of the fatty acid composition and biochemistry of some fresh-water fish oils and lipids in comparison with marine oils and lipids. *Comparative Biochemical Physiology* 22(3):907-922.

Original not reviewed.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

2. Ackman, R. G. 1971. Pristane and other hydrocarbons in some freshwater and marine fish oils. *Lipids* 6(7):520-522.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

3. Ackman, R. G., C. A. Eaton, E. G. Bligh, and A. W. Lantz. 1967. Freshwater fish oils: yields and composition of oils from reduction of sheepshead, tullibee, maria and alewife. *Journal of the Fisheries Research Board of Canada* 24(6):1219-1227.

Original not reviewed.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

4. Ackman, R. G., and S. N. Hooper. 1970. Branched-chain fatty acids of four freshwater fish oils. *Comparative Biochemical Physiology* 32:117-125.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

5. Adams, C. C., and T. L. Hankinson. 1928. The ecology and economics of Oneida Lake fish. *Roosevelt Wildlife Annals*, 1 (3 and 4):p. 235-548.

Original not reviewed. The authors reportedly describe the desirability of burbot as food.

KEY WORDS: UTILIZATION.

6. Aggassiz, L. 1850. Fishes of Lake Superior. In: Lake Superior, its physical character, vegetation, and animals, compared with those of other and similar regions, Part 6:p. 246-377.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

7. Alyeska Pipeline Service Company. 1974. Biological documentation of the Trans-Alaska Pipeline. Houston, TX: Alyeska Pipeline Service Company, Summary Report, Appendix E3-1014:361p.

Original not reviewed. Fish species presence and movements on Alaska's North Slope are reportedly documented in this report.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

8. Amin, O. M., and J. M. Burrows. 1977. Host and seasonal association of echinorhynchus salmonids (Acanthocephala: Echinorhynchidae) in Lake Michigan fishes. Journal of the Fisheries Research Board of Canada 34(3):325-331.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

9. Anderson, R. M. 1918. Eskimo food--how it tastes to a white man. Ottawa Naturalist 32(4):59-65.

Original not reviewed.

KEY WORDS: UTILIZATION.

10. Anderson, R. M. 1951. Report on the natural history collections of the Expedition. In: V. Stefanson, ed. My life with the Eskimo. New York: McMillan Co.:p. 450-455.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; CAPTURE METHODS; UTILIZATION.

11. Anderson, E. D., and L. L. Smith, Jr. 1971. A synoptic study of food habits of 30 fish species from western Lake Superior. University of Minnesota, Agricultural Experimental Station Technical Bulletin No. 279:199p.

Original not reviewed. The food habits of burbot are reportedly discussed.

KEY WORDS: FEEDING.

12. Andrews, A. C. 1949. The codfishes of the Greeks and Romans. Journal of the Washington Academy of Sciences 39(1):1-16.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

13. Andrews, E., and R. Peterson. 1983. Wild resource use of the Tuluksak River drainage by residents of Tuluksak, 1980-1983. Juneau, AK: Alaska Department of Fish and Game, Division of Subsistence, Technical Paper 87:p. 30-32.

The study documents burbot capture methods (traps and jigging) and known distribution in the Tuluksak River drainage in southwest Alaska.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST METHODS; UTILIZATION.

14. Andriyashev, A. P. 1954. Fishes of the northern seas of the U.S.S.R. Jerusalem: Israel Program for Scientific Translations, 1964. Artman, M. Ph.D., Translator. Ryby severnykh morei SSSR 53:p. 142-161.

The author describes morphology, life history, distribution and commercial importance of burbot in Russia.

KEY WORDS: BEHAVIOR; CLASSIFICATION; GEOGRAPHIC DISTRIBUTION; HARVEST; MORPHOLOGY; SPECIES DESCRIPTION.

15. Andrusak, H. 1981. Kootenay Lake sport fishery statistics, 1970-1980. Fisheries Technical Circular No. 53, British Columbia Fish and Wildlife Branch, Ministry of Environment (Victoria):p. 17-18.

This paper presents sport catch and effort data from the Kootenay Lake sport fishery. Peak annual harvest was 25,920 burbot with a CPUE of 1.48 fish per hour.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST.

16. Andryuk, L. V. 1974. Infection rate of fish with acanthocephalans in the upper Dnieper. Byull. Vses. Gel. 13:5-8.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

17. Antila, R. 1973. Effects of sewage on the fish fauna in the Helsinki area. *Oikos* (Supplement 15):226-229.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

18. Armstrong, F. A. J., and A. Lutz. 1977. Lake Huron 1974: PCB, chlorinated insecticides, heavy metals and radioactivity in offshore fish. Winnipeg, MB: Fisheries and Marine Service Technical Report No. 692:14p.

This Article describes levels of the above toxins in burbot sampled in Lake Huron.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

19. Armstrong, F. A. J. 1977. Lake Superior, 1974: PCB, chlorinated insecticides, heavy metals, and radioactivity in offshore fish. Winnipeg, MB: Fisheries Marine Service Technical Report No. 693:17p.

This article describes levels of the above toxins in burbot sampled in Lake Superior.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

20. Askhaev, M.G. 1958. Nalim. burbot, *Lota lota* L., Ryby I Rybnoe Khozyaistvo V Basseine Ozera Baikal. (Fishes and fishery in the basin of the Lake Baikal). Irkutsk:386-388.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; SPECIES DESCRIPTION.

21. Bagge, P., and L. Hakkari. 1982. The food and parasites of fish in some deep basins of northern Lake Paejaenne. 30 years Jubilee Symposium of the Finnish Limnological Society: lakes and water management Helsinki (Finland), 22-23 Sep 1980. *Hydrobiologia* 86(1-2):p. 61-65.

Original not reviewed. The composition of fish stocks, food, and "macroparasites" of lakes Jyvaesjaervi and North Paeijaenne are reportedly discussed. Burbot presence and parasitism are noted.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; PARASITES AND DISEASE.

22. Bailey, J. R., and J. A. Oliver. 1939. The fishes of the Connecticut watershed. In: Biological survey of the Connecticut watershed. New Hampshire Fish and Game Department. Survey Report No. 4:150-189.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

23. Bailey, R. M. 1938. The fishes of the Merrimack watershed. In: Biological survey of the Merrimack watershed. New Hampshire Fish and Game Department. Survey Report No. 3:149-185.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

24. Bailey, M. M. 1972. Age, growth, reproduction, and food of the burbot, *Lota lota* (Linnaeus), in southwestern Lake Superior. Transactions of the American Fisheries Society 101(4):667-674.

This paper summarizes results from an extensive study of burbot collected in southwestern Lake Superior. Provides an in-depth description of species utilization, sampling methods, age and growth, reproduction and food habits.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST MOVEMENTS; REPRODUCTION; UTILIZATION.

25. Bajkov, A. D. 1930. Fishing industry and fisheries investigations in the prairie province. Transactions of the American Fisheries Society 60(1930):215-237.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

26. Bajkov, A. D. 1932. Fish population and productivity of lakes. Transactions of the American Fisheries Society 62(1932):307-316.

Original not reviewed.

KEY WORDS: POPULATION DYNAMICS.

27. Baker, H. 1748. A letter concerning an extraordinary fish called Russian quab (*Gadus lota* ?) and on the Stones called carp's eyes. Philosophical Transactions of the Royal Society of London 45:174-180.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

28. Balashev, V. N., and L. E. Zhemchuzhnikova. 1966. Limfaticeskoe Ruslo Kishechnika Nekotorykh Vidov Ryb. (Intestinal lymphatic bed in some species of fish). Archives d'Anatomie d'Histologie et d'Embryologie 50(6):79-84.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

29. Baldwin, N. S., and R. W. Saalfeld. 1962. Commercial fish production in the Great Lakes, 1867-1960. Great Lakes Fisheries Commission Technical Report No. 3:166p.

Original not reviewed. Burbot catch data is reportedly presented in this publication.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

30. Balon, E. K. 1966. Prispievok k pozaniu ryrazenosti rybich spolocenstiev v inundacnych vodach dunaja. Biologia (Bratislava) 21(2):865-884.

Original not reviewed. This paper reportedly discusses burbot population dynamics in European Rivers.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS.

31. Bangham, R. V. 1941. Parasites of fish of Algonquin Park lakes. Transactions of the American Fisheries Society 70(1940):161-171.

Original not reviewed. The author reportedly discusses parasites in burbot.

KEY WORDS: PARASITES AND DISEASE.

32. Bangham, R. V. 1955. Studies on fish parasites of Lake Huron and Manitoulin Island. *American Midland Naturalist* 53(1):184-194.

Original not reviewed. The author reportedly discusses parasites in burbot.

KEY WORDS: PARASITES AND DISEASE.

33. Bangham, R. V., and J. R. Adams. 1954. A survey of the parasites of freshwater fishes from the mainland of British Columbia. *Journal of the Fisheries Research Board of Canada* 11(6):673-708.

Original not reviewed. The authors reportedly discuss parasites in burbot.

KEY WORDS: PARASITES AND DISEASE.

34. Bangham, R. V., and G. W. Hunter III. 1939. Studies on fish parasites of Lake Erie. Distribution studies. *Zoologica* 24(4); pt. 27:385-448.

Original not reviewed. The authors reportedly discuss parasites in burbot.

KEY WORDS: PARASITES AND DISEASE.

35. Bangham, R. V., and C. E. Venard. 1946. Parasites of Algonquin Park lakes. Toronto: University of Toronto Study No. 53, Publication of the Ontario Fisheries Research Laboratory 65:p. 33-46.

Original not reviewed. This paper reportedly summarizes parasite data from burbot.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PARASITES.

36. Bastl, I. 1985. Plodnost miena (*Lota lota* L.) v chránenom nálezisku hlavatky na Rieke Turiec. (The fertility of burbot (*Lota lota* L.) in the protected finding place of Huchen in the Turiec River). *Zivocisna Vyroba* 30(10):937-942.

Original not reviewed. Sex composition, length at maturity, fertility, and maturity coefficients for burbot are reportedly described.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

37. Beamish, R. J., W. L. Lockhart, J. C. Vanhoon, and H. H. Harvey. 1975. Long-term acidification of a lake and resulting effects on fishes. *Ambio* 4(2):98-102.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

38. Beamish, R. J., and W. B. Scott. 1969. Asymmetry of the trunk vertebrae of *Lota lota lacustris* (Walbaum). *Canadian Journal of Zoology* 47:537-538.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

39. Bean, T. H. 1878. The burbot, *Lota maculosa*. *Science News* 1:42-44.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

40. Bean, T. H. 1884. The burbot--*Lota maculosa*. In: Goode, G. B. ed., *The fisheries and fishery industries of the United States*. Washington: Government Printing Office, Section 1:235-240.

Original not reviewed.

KEY WORDS: TAXONOMY.

41. Bean, T. H. 1887. Field notes on Alaskan fishes, by Edward W. Nelson. Report upon natural history collections made in Alaska between the years 1877 and 1881. *Arctic Series Publications*. Signal Service. United States Army:p. 295-322.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

42. Bean, T. H. 1892. The fishes of Pennsylvania. *Pennsylvania State Commercial Fisheries*. Report for 1889-1891:1-149.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

43. Bean, T. H. 1897. Notes upon New York fishes received at the New York Aquarium. Bulletin of the American Museum of Natural History 9:327-375.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

44. Bean, T. H. 1902. Food and game fishes of New York. New York Forest, Fish and Game Commission. Report for 1901:251-460.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

45. Bean, T. H. 1903. Catalogue of the fishes of New York. New York State Museum, Bulletin No. 60:784p.

Original not reviewed. This publication reportedly discusses burbot reproduction and early life history.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

46. Beatty, D. D. 1969. Visual pigments of the burbot, *Lota lota*, and seasonal changes in their relative proportions. Vision Research 9(10):1173-1183.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

47. Becker, G. C. 1983. Burbot. In: Fishes of Wisconsin. Madison, WI: University of Wisconsin Press:747-751.

The author provides extensive details relative to species description, distribution, status, habitat, biology, importance, and management of burbot in Wisconsin waters.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MORPHOLOGY; MOVEMENTS; REPRODUCTION; SPECIES DESCRIPTION; UTILIZATION.

48. Beeton, A. M. 1956. Food habits of the burbot (*Lota lota lacustris*) in the White River, a Michigan trout stream. *Copeia* 1956(1):58-60.

Original not reviewed. This paper reportedly discusses burbot feeding, reproduction, and early life history.

KEY WORDS: FEEDING; REPRODUCTION.

49. Bendock, T. N. 1978. Fishery survey of major watershed headwaters of NPR-A. Juneau, AK: Alaska Department of Fish and Game, Sport Fish Division Unpublished Data Summary Report.

Results of fisheries surveys conducted on 20 lakes and 30 stream sites within the southern portion of National Petroleum Reserve-Alaska, on the North Slope of Alaska during 1977 and 1978 are provided. Limited age and growth, feeding, and distribution data of burbot are summarized along with field data survey forms.

KEY WORDS: AGE AND GROWTH; FEEDING; GEOGRAPHIC DISTRIBUTION.

50. Bendock, T. N. 1979. Inventory and cataloging of Arctic area waters. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-11, Annual Report of Progress 20(G-I-I):64p.

This report summarizes data on fish species collected (including burbot) during surveys of lakes and streams in the Colville River drainage on Alaska's North Slope.

KEY WORDS: AGE AND GROWTH; FEEDING; GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

51. Bendock, T. N. 1981. Inventory and cataloging of Arctic area waters. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-13, Annual Report of Progress 22(G-I-I):33p.

This report describes recorded winter distribution of several fish species, including burbot, in the Colville River drainage on Alaska's North Slope.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

52. Bendock, T. N. 1983. Inventory and cataloging of Arctic area waters. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-15, Annual Performance Report 24(G-I-I):p. 20.

This report presents preliminary data on the location and background of a radiotelemetry study of burbot in the Sagavanirktok River on the central North Slope of Alaska.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

53. Bendock, T. N., and J. Burr. 1984a. Freshwater fish distributions in the central Arctic coastal plain (Ikpikpuk River to Colville River). Juneau, AK: Alaska Department of Fish and Game, Sport Fish Division Unpublished Data Summary Report:53p.

This report presents information on the distribution of freshwater fishes in a 6,500 sq. mile section of Alaska's central Arctic coastal plain. Twelve species, including burbot, were captured in streams. Thirteen species, including burbot, inhabited lakes within the study area. Information on lengths, weights, ages, food habits, and distribution is presented.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

54. Bendock, T. N., and J. Burr. 1984b. Inventory and cataloging of Arctic area waters. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-6-16, Annual Performance Report 25(G-I-I):46p.

This report presents findings of several burbot studies on Alaska's North Slope. Radio-tagged burbot were monitored for fall and winter movements in the Sagavanirktok River. Overwintering habitat was characterized. Radio transmitters were also implanted in burbot in the Chandler and Ikpikpuk Rivers located in the central-western portion of the North Slope. Included are test netting results from several lakes and streams northwest of Umiat and along the Dalton Highway (North Slope Haul Road) where burbot were captured.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

55. Bendock, T. N., and J. Burr. 1985a. Freshwater fish distributions in the central Arctic coastal plain (Topogoruk River to Ikpikpuk River). Juneau, AK: Alaska Department of Fish and Game, Sport Fish Division Unpublished Data Summary Report:29p.

This report presents information on the distribution of freshwater fish, including burbot, in a 3,000 sq. mile section of the central Alaskan Arctic coastal plain between the Topogoruk and Ikpikpuk Rivers. Information on lengths, weights, and ages of common species is presented along with a discussion of distribution.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

56. Bendock, T. N., and J. M. Burr. 1985b. Inventory and cataloging of Arctic area waters. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-17, Annual Performance Report 26(G-I-I):39p.

This report contains summaries of lake and stream surveys on the Arctic coastal plain between the Topagoruk and Ikpikpuk Rivers northwest of Umiat. Movements of radio-tagged burbot in the Chandler, Colville, Chipp and Ikpikpuk Rivers near Umiat are noted along with associated habitat data. Burbot were sampled from the Yukon River between the Dall and Ray Rivers and resulting age, growth and maturity data are summarized.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; GEOGRAPHIC DISTRIBUTION; MOVEMENTS; REPRODUCTION.

57. Benschalom, G., and A. Flock. 1977. Calcium induced electron density in synaptic vesicles of afferent synapses on hair cells in the lateral line organ. Brain Research 121(1):173-178.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

58. Bensley, B. A. 1915. The fishes of Georgian Bay. Contributions to Canadian Biology. Supplement 47th Annual Report. Department of Marine Fisheries. Briton:p. 1-51.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

59. Berg, L. S. 1932. Übersicht der Verbreitung der Susswasserfische Europas. Zoogeographic 1(2):107-108.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

60. Berg, L. S. 1948-49. Freshwater fishes of the U.S.S.R. and adjacent countries. *Academii Nauk USSR* 3:943-949.

Original not reviewed. Burbot classification and distribution are reportedly discussed.

KEY WORDS: CLASSIFICATION; GEOGRAPHIC DISTRIBUTION.

61. Berg, L. S., and I. F. Pravdin. 1968. The fishes of the Kola Peninsula. *Izv. Vses. n. -i. inst. oz. i rechun. rybn. khoz.*, 26, No. 2.

Original not reviewed. Burbot distribution in Russia is reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

62. Bernard, C. 1904. Die Aalquappe, *Lota vulgaris*. *Wocheschrift fur Aquarien - und Terrarienkunde*. Braunschweig. 1(20):118-119.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

63. Bjorn, E. E. 1940. Preliminary observations and experimental study of the ling, *Lota maculosa* (LeSueur), in Wyoming. *Transactions of the American Fisheries Society* 69(1939):192-196.

This article describes sport harvest, reproduction and hatchery techniques for burbot taken from two Wyoming lakes in 1939.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST; HATCHERY CULTURE; MOVEMENTS; REPRODUCTION.

64. Black, E. C., F. E. J. Fry, and V. S. Black. 1954. The influence of carbon dioxide on the utilization of oxygen by some freshwater fish. *Canadian Journal of Zoology* 32:408-420.

Original not reviewed. This article reportedly documents lower lethal levels of dissolved oxygen for burbot.

KEY WORDS: PHYSIOLOGY.

65. Bligh, E. G. 1972. Mercury in Canadian fish. *Canadian Institute of Food Science Technology Journal* 5:A6-A14.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

66. Bodaly, R. A., R. N. Erickson, and R. J. P. Fudge. 1980. Pre- and post-impoundment experimental fish catches, Southern Indian Lake, Manitoba, 1972-1979. Canadian Data Report of Fisheries and Aquatic Sciences No. 201:73p.

The author presents pre- and post-impoundment fishery survey data (gillnet catches) for a water body in north-central Manitoba.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

67. Bond, W. A. 1974. Data on ciscoes, burbot, and longnose suckers from Great Slave Lake, Northwest Territories, 1973. Department of Environment, Fish and Marine Service, Operations Directorate Central Region, Data Report Series No. Cen/D-74-3:44p.

This report provides data on fish population structure, age and growth, commercial fishery capture rates, and capture methods for Great Slave Lake in 1973.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST.

68. Bond, W. A. 1975. Results of an experimental gill netting program at the west end of Great Slave Lake, NT during summer, 1974. Department of Environment, Fisheries and Marine Service, Operations Directorate Central Region, Data Report Series No. CEN/D-75-7:83p.

This report summarizes catch data from Great Slave Lake, and presents age and growth information of burbot as an incidentally captured species. Catch by mesh size is noted.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST.

69. Bonde, T., and J. E. Maloney. 1960. Food habits of burbot. Transactions of the American Fisheries Society 89(4):374-376.

This article discusses stomach contents and infers food preferences of burbot captured in Mille Lacs Lake in central Minnesota.

KEY WORDS: FEEDING; GEOGRAPHIC DISTRIBUTION; UTILIZATION.

70. Boytsov, M. P. 1971. The effect of warm water discharged below the Konakovo power station on the distribution and growth of young fishes of Ivan'Kovo Reservoir. *Journal of Ichthyology* 11(2):257-262.

Original not reviewed.

KEY WORDS: AGE AND GROWTH; MOVEMENTS.

71. Branion, H. 1930. The marketing of ling (burbot). *Transactions of the American Fisheries Society* 60(1929):199-203.

Original not reviewed.

KEY WORDS: HARVEST; UTILIZATION.

72. Branion, H. D. 1931. The vitamin content of burbot-liver oil. *Canadian Chemistry and Metallurgy* 15(8):214.

Original not reviewed.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

73. Brandt, S. B. 1986. Disappearance of the deepwater sculpin, (*Myoxocephalus-Thompsoni*), from Lake Ontario, USA-Canada: The Keystone Predator hypothesis. *Journal of Great Lakes Research* 12(1):18-24.

Original not reviewed. This paper reportedly implicates burbot, among other causes, with the disappearance of the deepwater sculpin from Lake Ontario during the early 1950's.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING.

74. Bruce, W. J. 1974. The limnology and fish populations of Jacopie Lake, West Forebay, Smallwood Reservoir, Labrador. St. John's, NF: Department of Fisheries and the Environment, Fisheries and Marine Service Fisheries Operations Directorate, Technical Report Series No. NEW/T-74-2:74p.

This report describes the results of a limnological and fish inventory investigation. Distribution, general behavior, and food habits of burbot in Canada are discussed.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

75. Bruce, W. J., and R. F. Parsons. 1979. Biology of the fishes of Ossokmanuan Reservoir, Labrador, 1976. St. John's, NF: Department of Fisheries and the Environment, Fisheries and Marine Service, Research and Resource Services Directorate, Technical Report 836:33p.

This report describes fishery survey information including species composition, CPUE, catch by mesh size, and age and growth information for burbot captured in the reservoir.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

76. Breder, C. M., Jr., and D. E. Rosen. 1966. Modes of reproduction in fishes. New York: American Museum of Natural History:p.376.

Original not reviewed.

KEY WORDS: REPRODUCTION.

77. Burgermeister, G., M. Bedrani, and J. Tarradellas. 1982. The burbot as an indicator of the contamination of continental waters by organochlorinated pollutants. Inst. Genie Environ., Ecole Polytech. Fed. Lausanne, 1015 Lausanne, Switzerland.

Original not reviewed. This paper reportedly discusses PCB levels in burbot from selected Swiss waters.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

78. Burgner, R. L., D. E. Rogers, and J. Reeves. 1965. Observations of resident fishes in the Tikchik and Wood River Lake systems. Seattle, WA: University of Washington, Publications in Fisheries Circular No. 229:14p.

Original not reviewed. This paper reportedly describes burbot presence in these systems in southwest Alaska.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

79. Byczkowska-Smyk, W. 1968. Observation of the ultrastructure of the hepatic cells of the burbot, *Lota lota* L. Zoologica Poloniae 18(2):287-295.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

80. Byczkowska-Smyk, W. 1969. Fatty pseudodegeneration of the burbot, *Lota lota* L., hepatocytes as revealed with the electron microscope. *Folia Histochemica et Cytochemica* 7:79-80.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

81. Cahn, A. R. 1936. Observations on the breeding of the lawyer (*Lota maculosa*). *Copeia* 1936(3):163-165.

Original not reviewed. Burbot spawning behavior is reportedly discussed.

KEY WORDS: REPRODUCTION.

82. Cameron, J. N. 1973a. Coronary blood supply in Teleost fish. *American Zoologist* 13(4):1297.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

83. Cameron, J. N. 1973b. Oxygen dissociation and content of blood from Alaskan burbot, *Lota lota*, pike, *Esox lucius*, and grayling, *Thymallus arcticus*. *Comparative Biochemistry and Physiology* 46(3):491-496.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

84. Cameron, J. N. 1974. Evidence for the lack of bypass shunting in teleost gills. *Journal of the Fisheries Research Board of Canada* 31(2):211-213.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

85. Cameron, J. N. 1975. Morphometric and flow indicator studies of the teleost heart. *Canadian Journal of Zoology* 53(6):691-698.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

86. Carl, G. C., W. A. Clemens, and C. C. Lindsey. 1967. The freshwater fishes of British Columbia. British Columbia Provincial Museum. Handbook No. 5:p. 141-142.

This report includes a brief description, distinguishing characteristics, distribution, and biological notes of burbot.

KEY WORDS: BEHAVIOR; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; UTILIZATION.

87. Carlander, K. D. 1942. An investigation of Lake of the Woods, Minnesota with particular reference to the commercial fisheries. Minnesota Department of Conservation, Investigative Report No. 42:534p.

Original not reviewed. Burbot distribution and harvest levels are reportedly discussed.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST.

88. Carlander, K. D. 1944. Relationship between standard, fork, and total lengths of some Minnesota fishes. Minnesota Bureau of Fisheries Research. Investigative Report No. 19:50p.

Original not reviewed.

KEY WORDS: MORPHOLOGY.

89. Carlander, K. D. 1969. Handbook of freshwater fishery biology. Volume 1. Ames, IA: The Iowa State University Press, 3rd. ed.:p. 572-575.

The author includes general life history data for burbot of the United States and Canada and citations for critical literature sources.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS; REPRODUCTION; SPECIES DESCRIPTION.

90. Carson, R. L. 1943. Fishes of the Middle East. United States Department of the Interior, Fish and Wildlife Service. Conservation Bulletin No. 34:44p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

91. Charnley, S. 1984. Human ecology of two central Kuskokwim communities: Chuathbaluk and Sleetmute. Juneau, AK: Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 81:p. 144-178.

This report describes the yearly harvest of various fish species in the middle Kuskokwim River of Alaska by traditional methods including hand-held and set lines as well as fixed traps. Noted are seasonal movements, harvest areas, and an account of under-ice burbot trapping methods.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST; MOVEMENTS; UTILIZATION.

92. Chen, L. C. 1969. The biology and taxonomy of the burbot, *Lota lota leptura*, in interior Alaska. Fairbanks, AK: Biological Papers of the University of Alaska No. 11:53p.

This paper summarizes numerous life history and taxonomic aspects of burbot life history. A comprehensive review of literature and the results of Alaskan investigations are included.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; MOVEMENTS; PHYSIOLOGY; REPRODUCTION; SPECIES DESCRIPTION; UTILIZATION.

93. Chernysheva, N. B. 1973. O Biologii Mukсосporidii Sphaerospora Cristata Schulman, 1962 V Molodi Nalima, *Lota lota* L. (The Biology of Sphaerospora Cristata Schulman, 1962 in the Fry of the Burbot, *Lota lota* L.). Parazitologiya 7(6):485-488.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

94. Chernysheva, N. B. 1976. Morphological characteristics of and certain problems of the biology of the Genus Apiosoma (Infusoria, Periticha) from the young of predatory fishes. Parazitologiya 10(2):170-177.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

95. Chihuly, M., R. McMillian, R. Morrison, T. Olson, A. Sekerak, R. Neterer, and J. Burr. 1980. Fisheries resources along the Alaskan gas pipeline route (Prudhoe Bay to the Yukon Territory) proposed by Northwest Alaskan Pipeline Company. Fairbanks, AK: LGL Ecological Research Associates, Inc. 1-2:665p.

This report describes general life history and known distribution of burbot in waters along the proposed gas pipeline route.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

96. Christie, W. J. 1972. Lake Ontario: effects of exploitation, introductions, and eutrofication on the salmonid community. *Journal of the Fisheries Research Board of Canada* 29(6):913-929.

Original not reviewed. This paper reportedly discusses some aspects of burbot population dynamics.

KEY WORDS: POPULATION DYNAMICS.

97. Christie, W. J. 1974. Changes in the fish species composition of the Great Lakes. *Journal of the Fisheries Research Board of Canada* 31:827-854.

This article provides a review of stock changes in the Great Lakes that have occurred due to species invasion, introduction, lake eutrofication, and pollution. Burbot presence and stock status are briefly mentioned.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS.

98. Clady, M. D. 1976. Distribution and abundance of larval ciscoes, *Coregonus artedi*, and burbot, *Lota lota*, in Oneida Lake. *Journal of Great Lakes Research* 2(2):234-247.

This article describes results of pelagic burbot larvae sampling in Oneida Lake, New York, during 1965-1975. Densities, distributions, and growth rates of larval fish are presented and related to adult abundance.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

99. Clady, M. D. 1978. Structure of fish communities in lakes that contain yellow perch, sauger, and walleye populations. In: Kendall, R. L. ed. *Selected Coolwater Fishes of North America*. Washington, DC: American Fisheries Society Special Publication 11:100-108.

This report describes species composition and diversity for several lakes in which burbot are present. Diversity indices and reproductive guilds are evaluated.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

100. Clemens, H. P. 1951a. The food of the burbot, *Lota lota maculosa* (LeSueur), in Lake Erie. Transactions of the American Fisheries Society 80(1950):56-66.

This article presents the results of stomach content analysis (>5,000 burbot) from the north shore of Lake Erie during 1946-1947. Food items varied in relation to capture methods, season, locality, and length of fish. Burbot fed on invertebrates until age III; older burbot fed mainly on fish species. Seasonal fullness, preferred prey species, and competition for food with other species are evaluated.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION.

101. Clemens, H. P. 1951b. The growth of burbot, *Lota lota maculosa* (LeSueur), in Lake Erie. Transactions of the American Fisheries Society 80(1950):163-173.

This article presents growth studies of 2,329 burbot. Growth rates and maturity data are discussed. Spawning and developmental periods are noted along with aging techniques.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; MOVEMENTS; REPRODUCTION.

102. Clemens, W. A., J. R. Dymond, and N. K. Bigelow. 1924. Food studies of Lake Nipigon fishes. University of Toronto Studies, Biological Series No. 25, Publications of the Ontario Fisheries Research Laboratory No. 25:p. 130-165.

Original not reviewed. This paper reportedly discusses food habits of burbot.

KEY WORDS: FEEDING.

103. Clemens, W. A., J. R. Dymond, N. K. Bigelow, F. B. Adamstone, and W. J. K. Harkness. 1923. The food of Lake Nipigon fishes. University of Toronto Studies, Biological Series No. 22, Publications of the Ontario Fisheries Research Laboratory No. 16:p. 173-188.

Food habits of burbot and possible food competition with lake trout are presented.

KEY WORDS: FEEDING.

104. Clemens, W. A. 1939. The fishes of Okanogan Lake and nearby waters. In: A Biological Survey of Okanogan Lake, British Columbia. Fisheries Research Board of Canada Bulletin No. 56:27-38.

Species composition of fish captured by gillnet and seine in and around this British Columbian lake is presented. Included is a brief note on burbot.

KEY WORDS: CAPTURE METHODS, FEEDING, GEOGRAPHIC DISTRIBUTION, MOVEMENTS.

105. Clow, B., and A. Marlatt. 1929. The antirachitic factor in burbot liver oil. Industrial and Engineering Chemistry 21(3):281-282.

Original not reviewed.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

106. Cobb, J. N. 1905. The commercial fisheries of the interior lakes and rivers of New York and Vermont. Annual Report of the United States Fisheries Commission 29(1903):225-246.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; SPECIES DESCRIPTION.

107. Coberly, C. E., and R. M. Horrall. 1980. Fish spawning grounds in Wisconsin waters of the Great Lakes. Madison, WI: University of Wisconsin Sea Grant Institute, WIS-SG-80-235.

Original not reviewed. Burbot spawning areas are reportedly identified.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

108. Colburn, R. 1946. Lawyer control. Wisconsin Conservation Bulletin 11(3):21.

Original not reviewed.

KEY WORDS: HARVEST.

109. Cooper, A. 1968. The burbot. *Animals* 10:444-447.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

110. Cope, E. D. 1879. *Lota maculosa* in the Susquehanna River. *American Naturalist* 13:457.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

111. Corkum, L. D., and P. J. McCart. 1981. A review of the fisheries of the Mackenzie Delta and nearshore Beaufort Sea, Canada. Canadian Manuscript Report in Fisheries and Aquatic Science No. 1613:1-55.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

112. Council Bluffs Nonpareil. 1951. Freshwater cod caught at Lake Manawa. *Iowa Conservationist* 10(5):143.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

113. Dall, W. H. 1898. The narrative of W. H. Dall, leader of the expedition to Alaska in 1866-1868. In: Dall, W. H., G. M. Dawson, and Wm. Ogilvie. *The Yukon Territory*. London: Downey and Co. Ltd.:438p.

Original not reviewed. This report lists early burbot size ranges (possibly exaggerated) for Alaska.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION.

114. Dambeck, K. 1879. Geographical distribution of the Gadidae, or the cod family in its relation to fisheries and commerce. United States Fish Commission. Report of 1877:531-557. Translated from German.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; SPECIES DESCRIPTION.

115. Darlington, P. J. 1957. Zoogeography: the geographical distribution of animals. New York: John Wiley and Sons, Inc.:675p.

Original not reviewed. The author reportedly discusses the movement of burbot from ocean to freshwater.

KEY WORDS: PHYSIOLOGY; SPECIES DESCRIPTION.

116. Day, F. 1880. The burbot, *Lota vulgaris*, and air bladders of fishes. Proceedings of Cotteswold Natural Field Club 7:221-242.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

117. Dean, E. L. 1975a. Reindeer Lake aquatic ecology and fisheries. Saskatoon, SK: Department of Tourism and Renewable Resources, Saskatchewan Fisheries Laboratory, Technical Report 75-3.

Original not reviewed. The author reportedly discusses burbot data from this lake.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION.

118. Dean, E. L. 1975b. Amisk Lake, Limnology and Fishery, 1972. Saskatoon, SK: Department of Tourism and Renewable Resources, Saskatchewan Fisheries Laboratory, Technical Report 75-10:196p.

Presents data on the limnology and fisheries of Amisk Lake. Catch (gillnet) by depth and mesh, age-weight-length, food habits, and relationships to other species are evaluated.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; POPULATION DYNAMICS.

119. Dechtiar, A. O. 1972. Parasites of fish from Lake of the Woods, Ontario. Journal of the Fisheries Research Board of Canada 29(3):275-283.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

120. Defreitas, A. S. W., M. A. J. Gidney, A. E. McKinnon, and R. J. Norstrum. 1977. Factors affecting whole body retention of methyl mercury in fish. In: Biological Implications of Metals in the Environment; Drucker, N. and R. E. Wolfred (Editors). Erda Symposium Series, Springfield, VA ERDA:44-451.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

121. Degens, E. T., W. G. Dewer, and R. L. Haedrich. 1969. Molecular structure and composition of fish otoliths. Marine Biology (Berlin) 2(2):105-113.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

122. DeKay, J. E. 1842. Zoology of New York or the New York Fauna, Part IV. Fishes. Printed by W. & A. White & J. Visscher:415p.

Original not reviewed. The poor food quality of burbot is reportedly discussed.

KEY WORDS: UTILIZATION.

123. Derksen, A. J. 1980. Evaluation of fish passage through culverts at the Goose Creek road crossing near Churchill, Manitoba, in April and May, 1977. Winnipeg, MB: Manitoba Department of Natural Resources, MS Report No. 80-4:103p.

This report describes burbot capture (hoop traps) and subsequent movements in relation to spring high water runoff through culverts. The culverts presented a barrier to most species.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

124. Devitsyna, G. V. 1972. Morfologiya Organov Obonyaniya Treskovykh (Sem. Gadidae). (Morphology of the olfactory organs of cod (Family Gadidae)). Voprosy Ikhtiologii 12(6):1094-1103. (Journal of Ichthyology 12(6):994-1002).

Original not reviewed.

KEY WORDS: MORPHOLOGY; PHYSIOLOGY.

125. Devitsyna, G. V. 1973. O Nekotorykh Morfologicheskikh I Funktsional'nykh Osobennostyakh Obonyatel'nykh Lukovits Nalima I Shchuki. (Certain morphological and functional properties of the olfactory bulb of pike and burbot). Vestnik Moskovskogo Universiteta Seriya VI Biologiya Pochvovedenie 28(1):10-18. English Summary.

Original not reviewed.

KEY WORDS: MORPHOLOGY; PHYSIOLOGY.

126. Devitsyna, G. V. 1977. Comparative study on the morphology of the olfactory analyzer in fish. Voprosy Ikhtiologii 17(1):129-139. (Journal of Ichthyology 17(1):116-125).

Original not reviewed.

KEY WORDS: MORPHOLOGY.

127. Diana, J. S. 1979. The feeding pattern and daily ration of a top carnivore, the northern pike, (*Esox lucius*). Canadian Journal of Zoology 57(11):2121-2127.

Pike food habits, digestive rates, and daily ration were determined. Burbot were an important food item of pike studied in Lac St. Anne, Alberta.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; UTILIZATION.

128. Dobie, J. 1966. Food and feeding habits of the walleye, *Stizostedion v. vitreum*, and associated game and forage fishes in Lake Vermilion, Minnesota, with special reference to the tullibee, *Coregonus (Leucichthys) artedi*. Minnesota Fisheries Investigation 4:39-71.

This paper presents burbot data from Lakes Vermilion and Mille Lacs. Burbot were trapped with other species, and food preferences, length-weight data, other sampling catch rates, and lake productivity were compared.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION.

129. Dodson, J., R. Morin, and G. Power. 1980. Estuarine fish communities of the eastern James-Hudson Bay coast. Environmental Biology of Fishes 5(2):135-141.

Sampling in six estuaries in eastern Canada revealed latitudinal variability in fish community composition supposedly due to differences in climate, postglacial dispersion, and restricted space.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

130. Dorr, J. A. III, and D. J. Jude. 1981. Organization and status of a cooperative Great Lakes regional fish larvae collection. *Journal of Great Lakes Research* 7:194-200.

Original not reviewed. This article reportedly contains information on larval burbot.

KEY WORDS: REPRODUCTION.

131. Dornesco, G. T., and P. Miscalenco. 1969. Etude Comparative De La Structure Branchies De Quelques Ordres De Teleosteens. *Anatomischer Anzeiger* 124(1):68-84.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

132. Doudoroff, P., and D. L. Shumway. 1970. Dissolved oxygen requirements of freshwater fishes. Rome, Italy: Food and Agriculture Organization of the United Nations, Fisheries Technical Paper No. 86:291p.

This paper summarizes minimum lethal dissolved oxygen levels and other contributing factors to fish mortality (including burbot). Lethal levels for burbot varied from 1.4-3.2 mg/l of dissolved oxygen.

KEY WORDS: PHYSIOLOGY.

133. Doving, K. B. 1966a. The influence of olfactory stimuli upon the secondary neurons in the burbot, *Lota lota* L. *Acta Physiologica Scandinavica* 66(3):290-299.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

134. Doving, K. B. 1966b. The influence upon the activity of single neurons in the olfactory bulb of the burbot. *Journal of Neurophysiology* 29(4):675-683.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

135. Doving, K. B., and G. Gemne. 1966. An electrophysiological study of the efferent olfactory system in the burbot. *Journal of Neurophysiology* 29(4):665-674.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

136. Doving, K.B., and G. Gosta. 1963. Fiber spectra and compound action potential of the olfactory tract in fish, *Lota lota* L. 11th Scandinavian Physiological Congress, Copenhagen, 1963. *Acta Physiologica Scandinavica* 59 (Supplement 213):31p.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

137. Doving, K. B., and G. Gosta. 1965. Electrophysiological and histological properties of the olfactory tract of the burbot, *Lota lota* L. *Journal of Neurophysiology* 28(2):139-153.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

138. Doving, K. B., and J. Hyvarinen. 1969. Afferent and efferent influence on the activity pattern of single olfactory neurons. *Acta Physiologica Scandinavica* 75(12):111-123.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

139. Downs, W. 1976. In: *Fish of Lake Superior* (WIS-SG-76-124). University of Wisconsin Sea Grant College Program, Madison, WI:p. 34.

The author includes a brief species description, life history, and utilization of burbot.

KEY WORDS: BEHAVIOR; GEOGRAPHIC DISTRIBUTION; HARVEST; MOVEMENTS; REPRODUCTION; SPECIES DESCRIPTION.

140. Doxey, M. 1981. Population studies of game fish and evaluation of managed lakes in the Salcha District with emphasis on Birch Lake. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-13, Annual Performance Report 22(G-III-K):p. 53, 56.

This report describes burbot age and growth data and harvest information for Harding Lake near Fairbanks.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; HARVEST.

141. Dryagin, P. A. 1949. Nalim - *Lota lota lota* (Linne'). In: Promyslovye Rybe USSR, . Berg L.S., Bogdanov A.S., Kozhin N.J., Rass T.S., eds.:p. 495-497. Rischepromizdat.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

142. Dryden, R. L., and J. N. Stein. 1975. Guidelines for the protection of the fish resources of the Northwest Territories during highway construction and operation. Winnipeg: Department of the Environment, Fisheries and Marine Service, Resource Management Branch, Central Region, Technical Report Series No. CEN/T-75-5:p. 12.

This study presents general recommendations regarding highway and culvert construction and velocity barriers for burbot. Maximum velocity barrier for burbot is approximately 20 cm/sec.

KEY WORDS: BEHAVIOR; MOVEMENTS.

143. Dryer, W.R. 1966. Bathymetric distribution of fish in the Apostle Islands region, Lake Superior. Transactions of the American Fisheries Society 95(3):248-259.

Data from trawl and gill net sampling at various depths and times of year are presented for several species including burbot. Seasonal changes in burbot distribution did not occur in the area sampled (southwestern Lake Superior).

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

144. Dugal, L.C. 1968. Pesticide residue in freshwater fish oils and meals. Journal of the Fisheries Board of Canada 25(1):169-172.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

145. Dushavskene-Duzh, N. F., G. G. Polikarpov, and B. I. Styro. 1969. Koeffitsienty Nakopleniya Strontsiya-90 V Nekotorykh Rybah (Radioekologicheskoe Issledovanie). (Coefficients of the accumulation of Strontium-90 in some fish (radioecological study). Radiobiologiya 9(1):113-115.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

146. Dymond, J. R. 1928. Some factors affecting the production of lake trout in Lake Ontario. University of Toronto Studies, Publications of the Ontario Fisheries Research Laboratory No. 33:29-41.

As part of this lake trout research, capture rates and food habits of burbot were studied. Burbot fed mainly on alewives during early summer and switched to ciscoes later in the season. Competition with lake trout for food is discussed.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST.

147. Dymond, J. R., J. L. Hart, and A. L. Pritchard. 1929. The fishes of the Canadian waters of Lake Ontario. University of Toronto Studies, Publications of the Ontario Fisheries Research Laboratory No. 37:3-35.

This publication describes the presence of various fish species in Lake Ontario and several of its tributaries. Burbot distribution and harvest are noted.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST; MOVEMENTS; REPRODUCTION.

148. Eales, J. G. 1969. A comparative study of purines responsible for silvering in several freshwater fishes. Journal of the Fisheries Research Board of Canada 26(7):1927-1931.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

149. Eales, J. G. 1972. Radiothyroxine metabolism in several freshwater teleost fishes. Canadian Journal of Zoology 50(5):623-631.

Original not reviewed.

KEY WORDS: PHYSIOLOGY

150. Eddy, S. 1944. Burbot, maligned fish. Conservation Volunteer 7(36):33-35.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

151. Eddy, S., and T. Surber. 1947. Northern fishes with special reference to the upper Mississippi Valley. Minneapolis, MN: University of Minnesota Press:p. 235-237.

Original not reviewed. This paper reportedly discusses reproduction and early life history of burbot.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

152. Ellis, D. V. 1962. Observations on the distribution and ecology of some Arctic fish. Arctic 15:179-190.

Original not reviewed. This article reportedly discusses burbot presence in some areas of northern Canada.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

153. Elser, A. A., and J. C. Schreiber. 1978. Environmental effects of western coal combustion. Part 1. The fishes of Rosebud Creek, Montana. Ecological Research Series of the U.S. Environmental Protection Agency. Available from: EPA Duluth, MN(USA):42p.

Original not reviewed. Burbot presence in relation to nearby coal mining and combustion is reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

154. Everman, B. W. 1899. It is a ling. Recreation 11(5):371-372.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

155. Everman, B. W., and E. L. Goldsborough. 1907a. The fishes of Alaska. Bulletin of the United States Bureau of Fisheries 26(1906):219-360.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

156. Everman, B. W., and E. L. Goldsborough. 1907b. A checklist of the freshwater fishes of Canada. Proceedings of the Biological Society of Washington 20:89-120.

Original not reviewed.

KEY WORDS: CLASSIFICATION; SPECIES DESCRIPTION.

157. Everman, B. W., and H. B. Latimer. 1910. The fishes of Lake of the Woods and connecting waters. Proceedings of the U.S. (Natural?) Museum 39:121-136.

Original not reviewed. The authors reportedly discuss burbot presence in this lake.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

158. Faber, D. J. 1967. Limnetic larval fish in northern Wisconsin lakes. Journal of the Fisheries Research Board of Canada 24(5):927-937.

Original not reviewed. This paper reportedly describes larval distribution of burbot.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS; REPRODUCTION.

159. Faber, D. J. 1970. Ecological observations on newly hatched lake whitefish in South Bay, Lake Huron. In: Lindsey, C. C.; Woods, C. S., eds. Biology of coregonid fishes. Winnipeg, MB: University of Manitoba Press:p. 481-500.

Capture techniques, index sampling, and limited early life history data of burbot are described.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS; REPRODUCTION.

160. Fabricius, E. 1954. Aquarium observations on the spawning behavior of the burbot, *Lota vulgaris* L. Report of the Institute of Freshwater Research, Drottingholm 35:51-57.

Original not reviewed. Observed burbot spawning behavior is reportedly described..

KEY WORDS: REPRODUCTION.

161. Falk, M. R., and L. W. Dahlke. 1975. Creel and biological data from streams along the south shore of Great Slave lake, 1971-74. Winnipeg, MB: Canadian Department of the Environment, Fisheries and Marine Service, Operations Directorate, Data Report Series No. CEN/D-75-8:49p.

Burbot presence is noted as part of a creel census study and fisheries survey.

KEYWORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

162. Farmer, G. J., and F. W. H. Beamish. 1973. Sea Lamprey (*Petromyzon marinus*) predation of freshwater teleosts. Journal of the Fisheries Research Board of Canada 30(5):601-605.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

163. Fedorova, G. V., and L. A. Kuderskij. 1982. Biology of and fishery for commercial fishes in Lake Ladoga. Sb. Nauch. Tr. Gosniorkh., No. 179. Leningrad (USSR); Gosniorkh:128p.

Original not reviewed. Burbot feeding on several fish species in the above lake is noted.

KEY WORDS: FEEDING.

164. Ferguson, R. G. 1958. The preferred temperature of fish and their midsummer distribution in temperate lakes and streams. Journal of the Fisheries Research Board of Canada 15(4):607-624.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

165. Ferguson, J. D. 1961. The human ecology and social economic change in the community of Tuktoyatuk, NT. Ottawa, ON: Northern Coordination and Research Centre, Department of Northern Affairs and National Resources, NCR 61-1:80p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; UTILIZATION.

166. Fimreit, N., and L. M. Reynolds. 1973. Mercury contamination of fish in northwestern Ontario. Journal of Wildlife Management 37(1):62-68.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

167. Fish, M. P. 1930. Contributions to the natural history of the burbot, *Lota maculosa* (LeSueur). Bulletin of the Buffalo Society of Natural Science 14(3):1-20.

This paper presents an early species description for burbot. Taxonomy, spawning, egg and larval development, adult description and morphology, distribution, feeding habits, and commercial utilization are noted; primarily for fish from the Great Lakes. Contains citations of historical importance.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MORPHOLOGY; MOVEMENTS; REPRODUCTION; SPECIES DESCRIPTION; UTILIZATION.

168. Fish, M. P. 1932. Contributions to the early life histories of 62 species of fishes from Lake Erie and its tributary waters. Bulletin of the U.S. Bureau of Fisheries 47(10):293-396.

This report presents data on trawl-sampled burbot and morphological descriptions of young fish.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION; SPECIES DESCRIPTION.

169. Flock, A. 1964. Structure of the macula utriculi with special reference to directional interplay of sensory responses as revealed by morphological polarization. Journal of Cellular Biology 22:413-431.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

170. Flock, A. 1971. Sensory transduction in hair cells. In: Handbook of Sensory Physiology, W. R. Lowenstein, ed. Vol. 1 Principles of Receptor Physiology. Heidelberg, Germany; Springer-Verlag:p. -396-441.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

171. Flock, A. 1973. Excitatory and inhibitory events in hair cells and afferent nerve terminals explored with intra-cellular micro-electrodes. Journal of the Acoustic Society of America 54(1):293.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

172. Flock, A., and A. J. Duvall. 1965. Ultrastructure of the kinocilium of the sensory cells in the inner ear and lateral line organ. Journal of Cellular Biology 25(1):1-8.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

173. Flock, A., J. M. Jorgensen, and I. J. Russell. 1973a. Passive electrical properties of hair cells and supporting cells in the lateral line canal organ. Acta Oto-Laryngologica 76(23):190-198.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

174. Flock, A., J. M. Jorgensen, and I. J. Russell. 1973b. The physiology of individual hair cells and their synapses. Royal Swedish Academy of Science Symposium Series. Basic Mechanisms in Hearing, Proceedings of the First Symposium, Stockholm, Sweden, October 30 - November 1, 1972; A. R. Muller, ed. Academic Press Inc., New York:237-306.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

175. Flock, A., and I. Russell. 1973a. Efferent nerve fibers: postsynaptic action on hair cells. *Nature, London (New Biology)* 243(124):89-91.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

176. Flock, A., and I. Russell. 1973b. The post-synaptic action of efferent fibers in the lateral line organ of the burbot, *Lota lota*. *Journal of Physiology (London)* 235(3):591-605.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

177. Flock, A., and I. Russell. 1976. Inhibition by efferent nerve fibers: action on hair cells and afferent synaptic transmission in the lateral line canal organ of the burbot, *Lota lota*. *Journal of Physiology (London)* 257(1):45-62.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

178. Forbes, S. A. 1888. On the food relations of freshwater fishes: a summary and discussion. *Bulletin of the Illinois State Laboratory of Natural History II*:p. 475-538.

Original not reviewed. The food habits of burbot are reportedly discussed.

KEY WORDS: FEEDING.

179. Forbes, S. A., and R. E. Richardson. 1920. The fishes of Illinois. In: *Natural History Survey of Illinois* 3:357p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

180. Forster, J. R. 1773. An account of some curious fishes, sent from Hudson's Bay. *Philosophical Transactions of the Royal Society of London Biological Sciences* 63(1):149-157.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

181. Foye, R. E. 1968. The effects of a low-dosage application of Antimycin-A on several species of fish in Crater Pond, Aroostock County, Maine. *Progressive Fish Culturist* 30(4):216-219.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

182. Fredeen, F. J. H., J. G. Saha, and L. M. Royer. 1971. Residues of DDT, DDE, and DDD in fish in the Saskatchewan River after using DDT as a blackfly larvicide for twenty years. *Journal of the Fisheries Research Board of Canada* 28:105-109.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

183. Frost, C. C. 1870. The compressed burbot or eel pout (*Lota comressa*). *American Naturalist* 4:251-252.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

184. Gablehouse, D. W. Jr. 1984. A length-categorization system to assess fish stocks. *North American Journal of Fisheries Management* 4:273-285.

This article describes Relative Stock Density (RSD) as a system of assessing fish stock structure and management objectives. Critical length ranges for burbot are presented.

KEY WORDS: MANAGEMENT.

185. Galkin, G. G., A. I. Kolyushev, and V. V. Pokrovskiy. 1966. The fish fauna of the reservoirs and lakes of Murmansk Province. In: *Ryby Murmanskoy oblasti. The fishes of Murmansk Province.* Murmansk Book Press.

Original not reviewed. Age and growth and geographic distribution of burbot are reportedly discussed.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION.

186. Gemme, G., and K. B. Doving. 1969. Ultrastructure properties of primary olfactory neurons in fish, *Lota lota* L. American Journal of Anatomy 126(4):457-475.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

187. Gerard, J. P. 1971. Differences Entre L'ulcerative Dermal Necrosis Et Le Syndrome Mycosiique. (Differences between ulcerative dermal necrosis and mycosis syndrome). Piscic. Fr. 28:42-43.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

188. Gerstemeier, R. 1985. Investigations on feeding ecology of fishes from the National Park Berchtesgaden, Bavaria, West Germany. Archiv fur Hydrobiologie Supplementband 72(3):237-286.

Original not reviewed. Feeding preferences and ecology of seven fish species, including burbot, are reportedly presented. Competition for food items was examined.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING.

189. Girsa, I. I. 1972. The effect of photoperiod and water temperature on photoreaction in some fish. Journal of Ichthyology 12(3):505-510.

This article discusses the photoreactions of juvenile burbot in various temperature regimes. Positive photoreaction was increased at temperature conditions unusual for them (7½ and 27½C). At a length of about 40 mm, burbot became negatively photoreactive. This corresponds to a size at which they are changing from a planktonic to benthic existence.

KEY WORDS: BEHAVIOR.

190. Gomazkov, O. A. 1959. O Vliyanií Temperatury Na Intensivnost' Pishcevariya Nalima. On the influence of temperature on the intensity of digestion by burbot. Byulleten' Instituta Biologii Vodokhranilishcha 5:26-28. Russian Translation: St. Johns, NF: Fisheries Research Board of Canada Translation Service 1390:7p.

Original not reviewed. Burbot feeding and physiology are discussed in this paper.

KEY WORDS: FEEDING; PHYSIOLOGY.

191. Gomazkova, V. S. 1963. O Shchelochnoi Fosfataze Obonyatel'Nogo Epiteliya Nekotorykh Presnovodnykh Ryb. (Studies on alkali phosphates of the olfactory epithelium in certain freshwater fishes). Materialy Po Biologii I Gidrologii Volzhskikh Vodokhanlishch. (Data on the biology and hydrology of Volga reservoirs). Moskow-Leningrad: Akad. Nauk SSSR:99-102.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

192. Gordeev, N. A., A. G. Poddubnyi, and L. K. Il'ina. 1974. Evaluation of the potential fish productivity of a reservoir. Voprosy Ikhtiologii 14(1):20-25.

Original not reviewed.

KEY WORDS: POPULATION DYNAMICS.

193. Goronwitsch, N. 1897. Der Trigemino-Fascialis-Komplex von *Lota vulgaris*. Festschrift zum Siebenzigsten Geburtstag von C. Gegenbaur (1896-1897)3:1-44.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

194. Gottberg, G. 1910a. Jaktlagelese ofver lakens tillvaxt lek och fodoamnen hos oss (*Lota vulgaris* Cuv.). Fiskeritid-skrift fur Finland. 19:114-121.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

195. Gottberg, G. 1910b. Mateen Kasvusta Suomessa. (Ueber den Zuwachs der *Lota vulgaris* in Finland). Luonnon Ystava. 14:100-102.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

196. Gottberg, G. 1912. Studier Ofver Lakens (*Lota lota* L.) Alder, Lak Och Fodoammen Hos Oss. Studien Uber das Alter, Das Laichen und die Nahrung von *Lota lota* L. in Finland. Finlands Fiskerier 1:146-162.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

197. Govyrin, V. A., and G. R. Leont'eva. 1971. The role of sympathetic vosomotor nerves in the transmission of adaptive trophic effects. Journal of Evolutionary Biochemical Physiology 7:117-120.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

198. Griffiths, W. A., A. Sekerak, and M. Jones. 1974. Distribution of fish species along alternative gas pipeline corridors in Alaska and the Yukon Territory. In: P. J. McCart, ed. Classification of streams in Beaufort Sea drainages and distribution of fish in Arctic and subarctic drainages. Canadian Arctic Gas Study Ltd., Calgary. Biological Report Series 19(2):176p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

199. Gunn, J. M. 1982. Acidification of lake trout (*Salvelinus namaycush*) lakes near Sudbury, Ontario. In: Johnson, R. E., ed. Acid Rain/Fisheries. Proceedings of an international symposium on acidic rain and fishery impacts on northeastern North America:351p.

Original not reviewed. The decline of burbot stocks, along with lake trout, in severely acidified lakes in eastern Canada is reportedly documented.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY; POPULATION DYNAMICS.

200. Gunther, A. 1862. Catalogue of the Acanthopterygii, Pharyngognathi and Anacanthini in the collection of the British Museum. Catalogue of fishes in the British Museum 4:534p.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

201. Gur'yanova, S. D., and V. S. Sidorov. 1985. The effect of some cestodes on the lip composition in the tissues of the burbot and stickleback. Parazitologiya 19(2):152-155.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

202. Gyurko, S., and Z. I. Nagy. 1971a. Anagaben Uber Die Ernahrungsdynamic Und Tropische Beziehungen Der Quappe, *Lota lota* L. Aspects of the nutritive dynamics and trophic relationships of the burbot (*Lota lota lota* L.) in the upper Mures River (In Romania). Studii si Cercetari de Biologie Seria Zoologie 23(4):367-376. From Selected Water Resources Abstracts 5(23):13.

Original not reviewed.

KEY WORDS: FEEDING.

203. Gyurko, S., and Z. I. Nagy. 1971b. Repartitia Structura Si Relatile Trofice Ale Poplatoilloe De Pesti Din Cursul Superior Al Muresului. (Distribution, structure, and trophic relationships of the fish populations of the upper course of the Muresh River). Studii Cercetari Piscicole Institutul de Cercetari si Proiectari Alimentare 4:311-348.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING.

204. Hablett, T. R. 1979. Fish inventories conducted within the National Petroleum Reserve on the North Slope of Alaska, 1977-78. Anchorage, AK: U.S. Department of the Interior, National Petroleum Reserve in Alaska 105(c) Land Use Study, Field Study 3. In: Studies of selected wildlife and fish and their use of habitats on and adjacent to the National Petroleum Reserve in Alaska, 1977-1978, 2(10):p. 337-406.

This report summarizes data collected by state and federal agencies to determine species composition, relative abundance, migration, age and growth, critical fisheries habitat, and genetic characteristics of the fisheries resources in NPR-A on Alaska's North Slope. Burbot information is included.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

205. Hackney, P. A. 1975. Ecology of the burbot (*Lota lota*) with special reference to its role in the Lake Opeongo fish community. Toronto: University of Toronto. 152p.

This dissertation presents an extensive ecological study of burbot, lake trout, and other fish species on two lakes in Ontario. Burbot growth rates and natural mortality changed over time due to forage base changes and recruitment variability. Burbot reproduction is investigated. Standing crop (1.25 kg/ha), movements, aggregation, CPUE, preferred habitat, and food preference data are presented. Food competition with lake trout is evaluated and an analysis of otolith aging is presented.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MANAGEMENT; MOVEMENTS; POPULATION DYNAMICS; REPRODUCTION; SPECIES DESCRIPTION.

206. Hagen, E. J. 1952. Ling hatching experiment. Cokeville, WY: Wyoming Game and Fish Commission:33p. (typewritten).

Original not reviewed.

KEY WORDS: HATCHERY CULTURE; REPRODUCTION.

207. Hallberg, J. E. 1979. Evaluation of management practices on four selected lakes of Interior Alaska. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-11, Annual Report of Progress 20(G-III-J):p. 129-130.

This report describes burbot age, growth, and reproduction in Harding Lake near Fairbanks.

KEY WORDS: AGE AND GROWTH; FEEDING; REPRODUCTION.

208. Hallberg, J. E. 1984. Evaluation of Interior Alaska waters and sport fish with emphasis on managed waters--Fairbanks District. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-16, Annual Performance Report 25(G-III-H):p. 63, 66-68.

This report describes burbot investigations in the lower Chena and adjacent Tanana Rivers near Fairbanks. Sport harvest, trapnet capture rate, tagging, age and growth, feeding and initial results of a radiotelemetry study are presented.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MOVEMENTS.

209. Hallberg, J. E. 1985. Evaluation of Interior Alaska waters and sport fish with emphasis on managed waters--Fairbanks District. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-17, Annual Performance Report 26(G-III-H):p. 13-17, 20-23.

This report summarizes the progress of a burbot population study in the lower Chena and middle Tanana Rivers near Fairbanks. Age, growth, and movements of Floy-tagged fish are reported. Winter movements of radio-tagged burbot are summarized.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

210. Hallberg, J. E. 1986. Interior Burbot Study Part A: Tanana River Burbot Study. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-10-1, Annual Performance Report 27(N-8-1):16p.

This report presents interim results of extensive investigations of burbot in Interior Alaskan rivers. Age, growth and sex composition of burbot captured by baited hoop traps is discussed. Aging techniques employing either vertebrae or otoliths were verified. Catch per unit effort (net-night) data are summarized for several sections of the Tanana River near Fairbanks. Habitat preferences and movement patterns are identified.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS; POPULATION DYNAMICS.

211. Halvorson, O. 1971a. Studies of the Helminth fauna of Norway 18: On the composition of the parasite fauna of coarse fish in the river Glomma, southeastern Norway. Norwegian Journal of Zoology 19:181-192.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

212. Halvorson, O. 1971b. Studies of the Helminth fauna of Norway 19:
The seasonal cycle and microhabitat preference of the leech,
Cystobranchus mammillatus (Malm, 1863), parasitizing burbot,
Lota lota L. Norwegian Journal of Zoology 19(2):177-180.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

213. Halvorson, O. 1972. Studies of the Helminth fauna of Norway 20:
Seasonal cycles of fish parasites in the river Glomma.
Norwegian Journal of Zoology 20(1):9-18.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

214. Hammang, J. P., and M. N. Mahadeva. 1982. Morphology and
ultrastructure of the urinary bladder of the burbot, *Lota*
lota. American Zoologist 22(4):887.

Original not reviewed.

KEY WORDS: MORPHOLOGY.

215. Hanson, J. M. 1980. Morphology and diet of young-of-the-year
burbot, *Lota lota*, in the Ottawa River. Canadian Field
Naturalist 94(3):311-314.

Original not reviewed. This article reportedly discusses age and growth,
feeding, distribution, and morphology of young burbot in eastern Canada.

KEY WORDS: AGE AND GROWTH; FEEDING; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY.

216. Hardy, E. 1968. The bottom feeding burbot. Did it originate from
an Atlantic sea-fish or a continental river-dweller? Aquar.
Pond. 33:424-425.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

217. Harkness, W. J. K., and J. L. Hart. 1927. The fishes of Long Lake,
Ontario. University of Toronto Studies, Biological Series
Publications, Ontario Fishery Research Laboratory No. 29:23-
31.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

218. Harkness, W. J. K., and F. E. J. Fry. 1940. Food of the ling, *Lota maculosa* (LeSueur) in Lake Nipissing, Ontario. Toronto, ON: University of Toronto, Zoology Reprint Library:6p.

Original not reviewed. Behavior, feeding, and movement patterns are reportedly discussed.

KEY WORDS: BEHAVIOR; FEEDING; MOVEMENTS.

219. Harlan, J. R., and E. B. Speaker. 1956. Iowa fish and fishing. Iowa Conservation Commission:377p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

220. Hart, C., S. Forbes, N. Pettigrew, and S. Toutant. 1983. La peche d'hiver au lac Saint-Pierre: analyse bio-socio-economique. Quebec. Miistere du Loisir, de la Chasse et de al Peche, Direction regionale de Trois-Rivieres, Corporation pour la mise en valeur du lac Saint-Pierre et Municipalite de Notre-Dame-de-Pierreville.

This report provides fishery effort and catch data as well as size information for burbot in Lake Saint-Pierre on the Saint Lawrence River in Quebec.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST.

221. Hartman, W. L. 1972. Lake Erie: effects of exploitation, environmental changes and new species on the fishery resources. Journal of the Fisheries Research Board of Canada 29(6):899-912.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

222. Hartmann, J. 1977. The burbot, *Lota lota*, in the eutrophicated Lake Constance. Archiv fuer Hydrobiologie 80(3):360-374.

Original not reviewed. This article reportedly discusses burbot population changes associated with lake eutrofication. Burbot distribution, competition, food, and reproduction may have been affected. Growth rates were density dependant.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; FEEDING; MOVEMENTS.

223. Hartmann, J., and H. Loeffler. 1978. Seasonal near bottom distribution of fish in eutrophic Lake Constance. Archiv fuer Hydrobiologie 83(1):69-79.

Original not reviewed. This article reportedly discusses the diversity of species composition, distribution patterns, depths of maximum yield, and species order. Burbot species order was five out of seven species as determined by numbers caught, dominance by depth, winter littoral distribution, and special distribution patterns.

KEY WORDS: BEHAVIOR; MOVEMENTS.

224. Hartmann, J., and H. Loeffler. 1980. Groessere wintertiefe von fischen mit der beschleunigten eutrophierung des Bodensees. (Increasing winter depths of fishes since cultural eutrofication of Lake Constance). Fischwirt. 30(3):22-23.

Original not reviewed. This article reportedly discusses the littoralisation of fishes of the profundal stock, an increase in species number, and the continued population of deep parts of the lake by burbot in association with lake eutrofication.

KEY WORDS: BEHAVIOR.

225. Hartmann, J., and H. Quoss. 1982. "Gangfisch": "To be or not to be" in Lake Constance. Fischwirt. 32(7):52-56.

Original not reviewed. This article reportedly documents the effects of burbot predation on the coregonids "Gangfisch" and Blaufelchen" of the lavaretus-group.

KEY WORDS: FEEDING.

226. Hartmann, J. 1983. Two feeding strategies of young fishes. Archiv fuer Hydrobiologie 96(4):496-509.

Original not reviewed. This article reportedly discusses the feeding strategies of young burbot.

KEY WORDS: FEEDING.

227. Hatfield, C. T., J. N. Stein, M. R. Falk, C. S. Jessop, and D. N. Shepherd. 1972. Fish resources of the Mackenzie River valley. Winnipeg, MB.: Environment Canada, Fisheries Service, Interim Report I, II:p. 1-83, 104-113.

Sampling techniques, age and growth, food habits, heavy metals, and environmental parameter data for burbot collected during fisheries surveys in Northwest Canada are described in this report.

KEY WORDS: AGE AND GROWTH; FEEDING; GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

228. Hattula, M. L., J. Janatuinen, and J. Paasivirta. 1978. A five-year monitoring study of the chlorinated hydrocarbons in the fish of a Finnish lake system. Environmental Pollution 15(2):121-140.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

229. Hazel, P. P., and R. Maufette. 1974. Vue d'ensemble sur les poissons recueillis au cours de l'ete 1973. Par le Service Environnement de la Societe d'Energie de la Baie-James, Rapport de recherches 18:469p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

230. Heard, W. R., R. L. Wallace, and W. L. Hartman. 1969. Distribution of fishes in freshwater of Katmai National Monument, Alaska, and their zoogeographical implications. U.S. Fish and Wildlife Service Special Science Report in Fisheries (509):20p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

231. Hearder, W. 1904. Capture of a burbot in cattewater. (England). Zoologist 4th Series 8(759):353.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

232. Hewson, L. C. 1955. Age, maturity, spawning, and food of burbot, *Lota lota*, in Lake Winnipeg. Journal of the Fisheries Board of Canada 12(6):930-940.

This article summarizes data from experimental netting in Lake Winnipeg, Canada. Data presented includes age and growth, length-weight, sexual maturity, spawning timing, and food preferences.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MOVEMENTS; REPRODUCTION.

233. Heyerdahl, E. G., and L. L. Smith. 1972. Fishery resources of Lake of the Woods, Minnesota. University of Minnesota, Agricultural Experimental Station Technical Bulletin No. 288:145p.

Original not reviewed. Harvest and capture methods for burbot are reportedly discussed.

KEY WORDS: CAPTURE METHODS; HARVEST; UTILIZATION.

234. Hinks, D. 1943. The fishes of Manitoba. Manitoba Department of Mines and Natural Resources.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

235. Hoffman, G. L. 1967. Parasites of North American freshwater fishes. Los Angeles, CA: University of California Press:486p.

Original not reviewed. The author reportedly summarizes parasites of burbot.

KEY WORDS: PARASITES AND DISEASE.

236. Hopkins, E. E., and C. M. Ritchie. 1943. The burbot. U.S. Fish and Wildlife Service Fishery Leaflet Number 21.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

237. Horler, A., M. E. Jarvis, and R. A. C. Johnston. 1985. Creel census study on Fox, Marsh and Tagish Lakes in the Yukon Territory, Canada, 1983. Canadian Manuscript Report of Fisheries and Aquatic Sciences No. 1803:46p.

Original not reviewed. The authors reportedly present results of an angler creel census conducted in 1983. Catch and effort data are reported for burbot and other species.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

238. Houghton, W. 1879. British fresh-water fishes. William Mackenzie Publishers, London:204p.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

239. Huang, C-T., and C. P. Hickman. 1968. Binding of inorganic iodide to the plasma proteins of teleost fish. Journal of the Fisheries Research Board of Canada 25(8):1651-1666.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

240. Hubbs, C. L., and K. F. Lagler. 1947. Fishes of the Great Lakes Region. Cranbrook Institute of Science Bulletin Number 26:p. 3, 98, Fig. 196.

A brief species description, distribution notes, and life history data of burbot is included in this publication.

KEY WORDS: BEHAVIOR; GEOGRAPHIC DISTRIBUTION; HARVEST.

241. Hubbs, C. L., and L. P. Schultz. 1941. Contributions to the ichthyology of Alaska with descriptions of two new fishes. Occasional Papers of the Museum of Zoology, University of Michigan 431:31p.

Original not reviewed. Early sampling and classification of burbot are reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; CLASSIFICATION.

242. Hudd, R. L., L. Urho, and M. Hilden. 1983. Occurrence of burbot, *Lota lota* L., larvae at the mouth of the Kryonjoki in Quarken, Gulf of Bothnia. *Aquilo Ser Zoologica* 22:147-148.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

243. Hunter, E. M. 1945. Mountain top codfish. In: *Outdoor Life's* anthology of fishing adventures. *Outdoor Life*:p. 17-21.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

244. Hutt, A. P. 1951. The burbot...freshwater cod. *The Fisherman* 2(10):10-11, 42-44.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

245. Il'yenko, A. I. 1969. Radioecology of freshwater fishes. *Ichthyology* 9(2):249-260.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

246. Ivanov, N. M. 1978. Innervation of the urinary tract of bony fishes. *Voprosy Ikhtiologii* 18(2):375-380.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

247. Ivanova, M. N. 1963. On nutrition of *Esox lucius*, *Lucioperca lucioperca*, and *Lota lota* during the first four years after damming of Gorky Reservoir. *Trudy Instituta Biologii Vodokhranilischa Akademii* 5(8):81-86.

Original not reviewed.

KEY WORDS: FEEDING.

248. Ivanova, M. N. 1968. Pishchevye Ratsiony I Kormovye Koeffitsienty Khishchnykh Ryb V Rybinskom Vodokhranilishche. (Nutritive rations and coefficients of predatory fishes in Rybinsk reservoir). Trudy Instituta Biologii Vnutrennikh Vod Akademii Nauk SSSR 17(20):180-198. Russian Translation: U.S. Bureau of Sportfish and Wildlife Translation:27p.

Original not reviewed.

KEYWORDS: BEHAVIOR; FEEDING.

249. Jacobson, S., and T. Jarvi. 1976. Antipredator-behavior of a 2-year old hatchery reared atlantic salmon, *Salmo salar*, and a description of the predatory behavior of burbot, *Lota lota*. Zoologisk Revy. 38(3):57-70.

Original not reviewed.

KEY WORDS: BEHAVIOR; FEEDING.

250. Jager, T., W. Nellen, W. Schofer, and F. Shodjai. 1979. Influence of salinity and temperature on early life stages of *Coregonus albula*, *C. lavaretus*, *R. rutilus*, *L. lota*. In: Lasker, R.; Sherman, K., eds. The early life history of fish: recent studies:p. 345-348.

Original not reviewed. The authors reportedly discuss the avoidance by burbot of brackish waters on the Baltic coasts of Europe during early life stages.

KEY WORDS: BEHAVIOR; GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY; REPRODUCTION.

251. Jakubowski, M. 1965. Narzady Zmyslowe Skory Ryb. II Budowa Narzadow Linii Nobocznej U Mietusa. (*Lota lota* L.), Szczypaka (*Esox lucius* L.) (Cutaneous sense organs of fishes. II the structure of lateral-line organs in the burbot, *Lota lota* L. and pike, *Esox lucius* L.). Acta Biologica Cracoviensia Series Zoologica 8(1):87-99.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

252. Jakubowski, M. 1967. Topografia Li Unerwienie Narzadow Linii nabocznej U Mietusa, *Lota lota* L. (Cutaneous sense organs of fishes. VI. The structure, topography, and innervation of lateral line organs in the burbot, *Lota lota* l.). Acta Biologica Cracoviensia Series Zoologica 10(1):39-47.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

253. Jasinski, A. 1962. Structure and vascularization of the pituitary body of Teleosts. II. The rainbow-trout (*Salmo irideus* (Gibb)), perch-pike (*Lucioperca lucioperca* L.), burbot (*Lota lota* L.), and pond-loach, (*Misgurnus fossilis* L.). *Acta Biologica Cracoviensia Series Zoologica* 5(1):67-93.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

254. Jasinski, A., and W. Kilarski. 1964. The gas gland in the swimbladder of the burbot, *Lota lota* L., and stone-perch, *Acerina cernua* L., its macro and microscopic structure based on observation of electron microscopy. *Acta Biologica Cracoviensia Series Zoologica* 7(1):111-125.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

255. Jensen, J. W. 1986. Gill net selectivity and the efficiency of alternative combinations of mesh sizes for some freshwater fish. *Journal of Fish Biology* 28(5):637-646.

Original not reviewed. Selectivity curves of nylon gillnets for burbot and Arctic char of different fatness as determined by the Gulland-Harding method are reportedly presented. Geometric and arithmetic series efficiency is discussed with their respective advantages.

KEY WORDS: CAPTURE METHODS.

256. Jessop, B., R. L. G. Lee, and G. Power. 1970. Observations on the fish fauna of the Leaf River, Ungava. *Canadian Field Naturalist* 84(4):365-367.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

257. Johnson, R. P. 1968. Changes in the fishery of Dore Lake between 1956 and 1967. Saskatoon, SK: Department of Natural Resources, Saskatchewan Fisheries Laboratory:99p.

This publication reports the results of a comparative fisheries survey conducted to assess changes in Dore Lake fish abundance caused by intensive fishing. Commercial catches of most species declined, while burbot presence in gillnets increased in winter. Age and growth of burbot is discussed.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST.

258. Johnson, L. 1972. Keller Lake: characteristics of a culturally unstressed salmonid community. *Journal of the Fisheries Research Board of Canada* 29(6):731-740.

This article documents feeding on burbot by lake trout.

KEY WORDS: BEHAVIOR.

259. Johnson, L. 1975. Distribution of fish species in Great Bear Lake, Northwest Territories, with reference to zooplankton, benthic invertebrates, and environmental conditions. *Journal of the Fisheries Research Board of Canada* 32(11):1989-2004.

This article discusses burbot presence in Great Bear Lake. Samples were obtained from lake trout stomachs and from inlet streams.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

260. Jones, D. R., J. W. Kiceniuk, and O. S. Bamford. 1974. Evaluation of the swimming performance of several fish species from the Mackenzie River. *Journal of the Fisheries Research Board of Canada* 31(19):1641-1647.

Critical water velocities at which fish passage did not occur are presented for 17 species of fish of various lengths. Values for burbot ranged from 15 to 25 cm/s at burbot lengths from 100 to 500 mm.

KEY WORDS: BEHAVIOR; MOVEMENTS.

261. Jordan, D. S., and B. W. Everman. 1898. The fishes of North and Middle America: a descriptive catalogue of the species of fish-like vertebrates found in the waters of northern America, north of the isthmus of Panama. *U.S. Nat. Mus., Bull.* 47, Part 3:p. 2183-3136.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

262. Jordan, D. S., and B. W. Everman. 1969. American food and game fishes. New York: Dover Publications, Inc.:p. 517-518.

This publication includes a general species description of burbot.

KEY WORDS: BEHAVIOR; CLASSIFICATION; GEOGRAPHIC DISTRIBUTION.

263. Jordan, D. S., B. W. Everman, and H. W. Clark. 1930. Checklist of the fishes of middle America. Rept. U. S. Comm. Fish. (1928), Appendix X.

Original not reviewed.

KEY WORDS: CLASSIFICATION; SPECIES DESCRIPTION.

264. Jordan, David Starr, B. W. Everman, and H. W. Clark. 1930. Checklist of the fishes and fishlike vertebrates of North America north of the northern boundary of Venezuela and Columbia. Rept. U.S. Comm. Fish. (1928), Part 2:670p.

Original not reviewed.

KEY WORDS: CLASSIFICATION; GEOGRAPHIC DISTRIBUTION.

265. Jordan, David Starr, and C. H. Gilbert. 1883. A synopsis of the fishes of North America. U.S. Nat. Mus., Bull 16:1018p.

Original not reviewed.

KEY WORDS: CLASSIFICATION; GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

266. Jude, D. J. 1982. Family Gadidae, codfishes. In: N. A. Auer, ed. Identification of larval fishes of the Great Lakes basin with emphasis on the Lake Michigan drainage. Ann Arbor, MI: Great Lakes Fishery Commission, Special Publication 82-3:p. 470-476.

Original not reviewed. The author reportedly provides a key to larval burbot.

KEY WORDS: CLASSIFICATION.

267. June, F. C. 1977. Reproductive patterns in seventeen species of warmwater fishes in a Missouri River reservoir. Environmental Biology of Fishes 2(3):285-296.

Original not reviewed. The ovarian maturation and spawning of 17 fish species, including burbot, in Lake Oahe are reportedly discussed.

KEY WORDS: REPRODUCTION.

268. Kari, P. R. 1985. Wild resource use and economy of Stony River village. Juneau, AK: Alaska Department of Fish and Game, Division of Subsistence, Technical Paper No. 108:p. 125-129.

This report discusses subsistence capture methods, utilization, and burbot behavior in the middle Kuskokwim River drainage of Southwest Alaska. Burbot are mainly captured in rivers under the ice in fixed traps during the dead of winter.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; MOVEMENTS; UTILIZATION.

269. Kammerer, Paul. 1906. Das Gefangenleben der Aalquappe (*Lota lota* Linne). Blatter fur Aquarien-und Terrarienkunde, Vol. 17:p. 443-45, 455.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

270. Kassnaky, W. J. 1928. Zur Morphologie der Brut von *Lota lota* L. Zoogischer Anzeiger 79:p. 143-48.

Original not reviewed.

KEY WORDS: MORPHOLOGY.

271. Kaveliers, M. 1980. Circadian locomotor activity rhythms of the burbot, *Lota lota*: seasonal differences in period length and the effect of pinealectomy. Journal of Comparative Physiology. A: Sensory Neural and Behavioral Physiology 136(3):215-218.

Original not reviewed. This article reportedly discusses circadian locomotor activity rhythm under different conditions of photoperiod and pineal gland influence.

KEY WORDS: PHYSIOLOGY.

272. Keleher, J. J. 1952. The subspecific name of the Great Slave Lake burbot. Annual Report Central Fisheries Research Station for 1952 (Fisheries Research Board of Canada), App. 23:p. 62-63.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

273. Keleher, J. J. 1961. Comparison of largest Great Slave Lake fish with North American records. *Journal of the Fisheries Research Board of Canada* 18(3):417-421.

This article reports the maximum size of burbot captured in this lake (18.5 lbs). The largest Alaska caught burbot was 60 lbs and the world record was 75 lbs.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION; HARVEST; SPECIES DESCRIPTION.

274. Keleher, J. J. 1963. The movement of tagged Great Slave Lake fish. *Journal of the Fisheries Research Board of Canada* 20(2):319-326.

This article presents results of tagging/recapture studies of several species, including burbot in Great Slave Lake from 1946 to 1955. A total of 112 burbot were tagged and 12 recaptured using gillnets. One burbot moved 73 miles across the lake and then 181 miles down the Mackenzie River (north) in 90 days. Within-lake movement is discussed. Movements of up to 0.9 miles per day were documented.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

275. Keleher, J. J. 1966. Data on catch from 1958-1960 summer Great Slave Lake commercial fishery. London, ON: Fisheries Research Board of Canada, Manuscript Report Series No. 841, Manuscript reports of the Great Slave Lake investigation No. 50.

This report contains computer codes and IBM coded catch data for various fish species.

KEY WORDS: HARVEST.

276. Kendel, R. E., R. A. C. Johnston, U. Lobsiger, and M. D. Kozak. 1975. Fishes of the Yukon coast. Victoria, BC: Department of the Environment, Beaufort Sea Project, Technical Report No. 6:114p.

Original not reviewed. Burbot presence in relation to environmental factors on the Yukon coast of northwestern Canada is reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

277. Kennedy, W. A. 1940. The migration of fish from a shallow to a deep lake in spring and early summer. Transactions of the American Fisheries Society 70(1940):391-396.

Original not reviewed. This article reportedly documents summer movements of burbot from shallow to deeper (cooler) water.

KEY WORDS: BEHAVIOR; MOVEMENTS.

278. Khalilov, F. K. 1968. Some material on the histology and histochemistry of the pancreas and liver of teleost fishes. Problems in Ichthyology 8(2):246-249.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

279. Kieckhafer, H. 1970. The biology of the Bodensee fish (*Lota lota* L.). Toronto, ON: University of Toronto, Zoology Reprint Library; German translation, Regier, H. A., translator.

Original not reviewed.

KEY WORDS: HARVEST; MOVEMENTS; POPULATION DYNAMICS.

280. Kieckhafer, H. 1972. Die Biologie Der Bodenseetrueschen, *Lota lota*. (The Biology of *Lota lota* in the Bodensee). Zoologischer Anzeiger 189(5-6):298-325.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

281. Kilarski, W. 1964. The organization of the sarcoplasmic reticulum in skeletal muscles of fishes. I. The sarcoplasmic reticulum of striated muscles of the swim bladder in the burbot, *Lota lota* L. Acta Biologica Cracoviensia Series Zoologia 7(2):161-168.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

282. Kirsche, W. 1966. Biometrische Untersuchungen Am Nucleu Nervi Oculomortori Von Susswasser-Knochenfischen In Beziehung Zur Verhaltensweise. (Biometrical investigations on the nucleus nervi oculomotorii from freshwater bony fish in respect to their behavior). Biologisches Zentralblatt 85(5):578-596.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

283. Klocke, J. F., T. Porter, R. I. Tack, E. Leppler, N. S. Henry, and Ruth Nichols. 1946. Nutritive value of fish from Michigan waters. I. Nicotinic acid of lake herring, carp, common sucker, and burbot. Food Research 11(2):179-86.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

284. Klovke, J. F., P. I. Tack, M. A. Ohlson, R. Nichols, E. Leffler, H. Scott, and N. Scott. 1947. Thiamin of the lake herring, carp, common sucker, burbot and smelt. Food Research 12(1):36-43.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

285. Koelz, W. 1929. Coregonid fishes of the Great Lakes. Bulletin of the U.S. Bureau of Fisheries 43(1927)Part II:297-643.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

286. Kogl, D. R., and D. M. Schell. 1975. Colville River Delta fisheries research. In: Alexander, V.; Burrell, D. C.; Chang, J., eds. Environmental studies of an Arctic estuarine system. Final Report. U.S. Environmental Protection Agency, Corvallis, OR:483-504.

Original not reviewed. Regional fishery utilization, life histories, and movement patterns of major fish species, including burbot, are discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; UTILIZATION.

287. Kogl, D. R. 1971. Monitoring and evaluation of arctic waters with emphasis on the North Slope drainages: Colville River Study. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-3, Annual Report of Progress 12(G-III-A):p. 40.

This report briefly describes burbot presence and length/weight data for a sample of ten burbot.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

288. Kohler. 1907. Unsere Einheimischen Susswasserfische. VIII. Die Aalquappe (Aalraupe, Rutte, Trusche; *Lota lota* (L.)). Blatter fur Aquarien-und Terrarien-kunde 18:p. 445-48.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

289. Koops, H. 1959. The stock of *Lota lota* L. (burbot) in the Elbe. Investigations on the biology and the importance in the fishing industry of this fish. The effect, also, of the dam at Geesthacht on this stock. Kurze Mitteilungen Inst. Fischereibiologie. Univ. Hamburg 1959(9):2-61. University of Toronto, Zoology Reprint Library:3p.

Original not reviewed. The author reportedly discusses general species biology.

KEY WORDS: REPRODUCTION; SPECIES DESCRIPTION.

290. Koops, H. 1960. Die Bedeutung der Staustufe Geesthacht fur die Quappen fischerei der Elbe. Kurze Mitteilungen 10:p. 43-55.

Original not reviewed. The author reportedly discusses stream spawning of burbot.

KEY WORDS: REPRODUCTION.

291. Koskimies, A. I. 1973. Comparative study of proteins, non-specific esterases and acid phosphatases in testicular fluids of different vertebrate species. Annales Medicinæ Experimentalis et Biologiae Fenniae 51(3):83-92.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

292. Krajukhin, B. V. 1963. Structure and innervation of the alimentary tract of *Lota lota* L. Trudy Instituta Biologii Vodojhranilishcha 5(8):110-123.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

293. Kroneld, R. 1974. Autumn and spring phase shifts in the burbot, *Lota lota* L. (Pisces, Gadidae) at the Arctic Circle. Memoranda Societas pro Fauna et Flora Fennica Fauna Fennica 50:125-136.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

294. Kroneld, R. 1974. Beitrag Zur Diskussion Veber Die Desynchronisierte Winteraktivitaet Der Quappe, *Lota lota* (L.) (Pisces, Gadidae) Am Polarkreis. (Desynchronized winter activity in the burbot, *Lota lota* (L.) (Pisces, Gadidae) at the Arctic Circle). Zoologischer Anzeiger 193(3-4):245-250.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

295. Kroneld, R. 1974. Diel rhythmicity in the locomotory behavior of eye-eliminated burbot, *Lota lota* L. (Pisces, Gadidae). Revue Roumaine de Biologie 19(4):257-260.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

296. Kroneld, R. 1975. A working model for the synchronization of light in phase shifting burbot, *Lota lota* L. (Pisces, Gadidae) at the Polar Circle. Revue Roumaine de Biologie 20(2):147-153.

Original not reviewed. This article reportedly discusses the daily rhythmic behavior of burbot. Main periods of activity were in the morning and evening, but tended to shift to daytime during the shorter days of autumn in northern latitudes as presumably determined by optimum light conditions.

KEY WORDS: BEHAVIOR; MOVEMENTS; PHYSIOLOGY.

297. Kroneld, R. 1976. Phase shift of swimming activity in the burbot, *Lota lota* L. (Pisces, Gadidae) at the Arctic Circle. *Physiological Zoology* 49(1):49-55.

Original not reviewed. This article reportedly discusses locomotor activity in northern latitude young of the year burbot (66½ 42' N). Burbot were night-active in summer and day-active in winter. Activity shift occurs at or near the equinox.

KEY WORDS: BEHAVIOR; MOVEMENTS; PHYSIOLOGY.

298. Kroneld, R. 1976. Visual pigments and liver vitamins A-1 and A-2 in the burbot, *Lota lota* (Pisces, Gadidae). *Memoranda Societas pro Fauna et Flora Fennica Fauna Fennica* 52:47-54.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

299. Ksenzov, N. A. 1966. The fish fauna of the Tuloma Reservoirs. In: *Ryby Murmanskoy oblasti. The fishes of Murmansk Province.* Murmansk Book Press.

Original not reviewed. The author reportedly discusses burbot distribution in Russia.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

300. Kulkin, S. G. 1968. Afferent bladder innervation in certain teleosts. *Doklady Akademii Nauk SSSR* 178(4,5,6):960-963.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

301. Kul'Kin, S. G. 1967. Morfologiy Sinapsov Intramural'Nykh Neironov Mochevogo Puzyrna Kostistyykh Ryb. (The morphology of the synapses of the intraneural neurons of the teleost bladder]. *Doklady Akademii Nauk SSSR* 176(1):446-448.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

302. Kuterman, B. I., I. A. Verigina, and V. V. Kuz'mina. 1985. Ultrastructure of the intestinal epithelium of the burbot, *Lota lota* (Gadidae). *Voprosy Ikhtiologii* 25(2):275-282.

Original not reviewed. This article reportedly describes the structural features, anatomy and histomorphology of burbot intestines.

KEY WORDS: PHYSIOLOGY.

303. Kuznetsov, V. A. 1975. The reproduction, distribution and growth of juvenile fish of some species from Sviyaga Bay, Kuybyshev Reservoir. *Journal of Ichthyology* 15(6):950-962.

Original not reviewed.

KEY WORDS: AGE AND GROWTH; FEEDING; REPRODUCTION.

304. Kuznetsov, V. A., and N. I. Fadeev. 1979. Some characteristics of fish reproduction in parts of the Volga, USSR, before and after current regulation. *Voprosy Ikhtiologii* 19(1):93-102.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

305. Kuz'mina, V. V. 1968. Vliyanie Goidoaniya Na Fiziko-Khimicheskie Pokazateli Krovi Nalima, *Lota lota* L. (The effect of starvation on the physiochemical variables of the blood of the burbot, *Lota lota* L.). *Trudy Instituta Biologii Vodokhranilishcha Akademii Nauk SSSR* 17(20):253-263.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

306. Kuz'mina, V. V. 1968. Vliyanie Pishchevareniya Na Reaktsiyu (PH) Zheludochnogo Soka Nalima, *Lota lota* L. (Effect of digestion on the ph reaction of the gastric juice of the burbot, *Lota lota* L.). *Voprosy Ikhtiologii* 8(3):570-576. (Problems of Ichthyology 8:453-458).

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

307. Kuz'mina, V. V. 1970. The occurrence of a long lived burbot with a Basov's gastric fistula. Journal of Ichthyology 10(4):561-562.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

308. Kuz'mina, V. V. 1976. Use of the method of step-by-step alpha-amylase desorption from intestinal sections in studying membrane digestion in fish. Voprosy Ikhtiologii 16(5):944-946. (Journal of Ichthyology 16(5):856-859).

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

309. Kuz'mina, V. V. 1977. Characteristics of membrane digestion in freshwater bony fishes. Voprosy Ikhtiologii 17(1):111-119.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

310. Kuz'mina, V. V. 1977. Peculiarities of the membrane digestion in freshwater teleosts. Journal of Ichthyology 17(1):99-107.

Original not reviewed.

KEY WORDS: FEEDING; PHYSIOLOGY.

311. Kuz'mina, V. V., and E. N. Morozova. 1977. Effects of temperature on alpha-amylases activity of freshwater bony fishes. Voprosy Ikhtiologii 17(5):922-929. (Journal of Ichthyology 17(5):778-785).

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

312. Kuz'mina, V. V., and L. P. Zhilina. 1973. Sootnoshenie Kontsentratsii Glikogena V Pecheni I Myshtassakh Nekotorykh Presnovodnykh Kostistykh Ryb. (The ration of glycogen concentrations in the liver and muscle of some freshwater teleost fish). Voprosy Ikhtiologii 13(4):740-744. (Journal of Ichthyology 13(4):623-627).

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

313. Kvasova, I. P. 1968. O Belvovoi Sisteme Syvorotki Krovi Nalima. (On the protein system of the blood serum of the burbot). Sevetova, A.N. (ED.) Ekologo-Fiziolicheskie Osobennosti Krovy Ryb. Leningrad: Akad. Nauk SSSR Inst. Morfor. Zhivatnykh:110-115.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

314. Kvasova, I. P. 1968. Sezonnaya Kharakteritika Kolichestva Krovi I Gemoglobina V Organizme Nalima. (Seasonal characteristics in the amount of blood and hemoglobin in the burbot). Sevetova, A. N. (ED.). Ekologo-Fiziolicheski Osobennosti Krovy Ryb. Leningrad: Akad. Nauk SSSR Inst. Morfol. Zhivatnykh:81-84.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

315. Kvasova, I. P., and S. A. Kuz'min. 1968. Nekotorya Morfologiceskie Kharakteristiki Nalima I Sudaka Kurstogo Zaliva, Baltiiskogo Morya. (Some morphological characteristics of the burbot and pike perch of Kurskii Bay of the Baltic Sea). Sevetove, A. N. (ED). Ekologo-Fiziolicheskie Osobennosti Krovy Ryb. Leningrad: Akad. Nauk SSSR Inst. Morfor. Zhivatnykh:87-89.

Original not reviewed.

KEY WORDS: MORPHOLOGY.

316. Kyle, H. M. 1897. Note on the reproductive organs of a hermaphroditic ling. Fifteenth Annual Report, Fish Board of Scotland, Part 3:p. 396-98.

Original not reviewed.

KEY WORDS: PHYSIOLOGY; REPRODUCTION.

317. Ladanov, Yu V., and S. V. Tikhonov. 1985. A model of a lake fish community. Voprosy Ikhtiologii 25(6):925-932.

Original not reviewed. This article reportedly discusses a mathematical model for a fish community based on Lake Ladoga, Russian SFSR, USSR. The model describes trophic relations and includes burbot.

KEY WORDS: BEHAVIOR; FEEDING; GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS.

318. Lakey, R. T., F. W. Mittelstadt, and M. G. DeNavarre. 1941. The chemistry of burbot liver oil. American Pharmaceutical Association Science Bulletin 30(1).

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

319. Lavrova, E. A., and Y. V. Natochin. 1973. Kontsentratsiya Kationov V Krovi I Ionoreguliroyshchaya Funktsiya Pochki Nekotorykh Predstavitelei Ikhtiofauny Ozera Baikal. (Cation concentration in the blood and ion-regulating function of the kidney of some Lake Baikal fishes). Voprosy Ikhtiologii 13(5):914-920. (Journal of Ichthyology 13(5):764-769.)

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

320. Lawler, G. H., and G. P. McRae. 1961. A method for preparing glycerin-stored otoliths for age determination. Journal of the Fisheries Research Board of Canada 18(1):47-50.

The author reports on improved readability of burbot otoliths by heating glycerin-preserved otoliths for 10 minutes at 190°C, and for longer times at lower temperatures.

KEY WORDS: AGE AND GROWTH.

321. Lawler, G. H. 1963a. The biology and taxonomy of the burbot, *Lota lota*, in Heming Lake, Manitoba. Journal of the Fisheries Research Board of Canada 20(2):417-433.

This article reports on capture methods (gillnets, seines, hoopnets), age and growth, food preferences, reproductive factors, activity, coloration, habitat, classification, and morphology of burbot.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; REPRODUCTION; SPECIES DESCRIPTION.

322. Lawler, G. H. 1963b. Basic data on the burbot, *Lota lota*, of Heming Lake, Manitoba. Fisheries Research Board of Canada, Manuscript Report Series No. 739:p. 1-27.

This report presents tabular data, graphs, and methods referred to in Lawler, 1963a.

KEY WORDS: AGE AND GROWTH; CLASSIFICATION; MORPHOLOGY.

323. Lawler, G. H. 1968. *Triaenophosrou* *Nodulosa* in burbot, *Lota lota*, from Heming Lake, Manitoba. Journal of the Fisheries Research Board of Canada 25(11):2523-2524.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

324. Lee, C. F. 1948. Thiaminase in fishery products: A review. Commercial Fishery Review 10(4):7-15.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

325. Lehtonen, H. 1985. Changes in commercially important freshwater fish stocks in the Gulf of Finland during recent decades. Finnish Fisheries Research 6(10):61-70.

Original not reviewed. This article reportedly discusses the status of burbot stocks and other species during the period 1962-1982. Factors influencing changes are evaluated.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; POPULATION DYNAMICS.

326. Leino, R. L. 1979. Aspects of the fine structure, cytochemistry and distribution of teleost Rodlet cells. The Union for Experimenting Colleges and Universities. In: Volume 41/02-B of Dissertation Abstracts International:p.435.

Original not reviewed. This publication reportedly discusses rodlet cells, of undetermined function, found in fish epithelium. It was tentatively suggested that the cells performed a function that, through excretion of antibiotic enzymes or toxins, may help control the level of pathogenic organisms (ectoparasites).

KEY WORDS: PARASITES AND DISEASE; PHYSIOLOGY.

327. Leong, T. S., and J. C. Holmes. 1981. Communities of metazoan parasites in open water fishes of Cold Lake, Alberta, Canada. *Journal of Fisheries Biology* 18(6):693-714.

Original not reviewed. This article reportedly discusses the presence of metazoan parasites on burbot and advances the theory that the parasite community within an ecosystem is characterized by the parasites of the numerically dominant hosts.

KEY WORDS: PARASITES AND DISEASE.

328. Leslie, J. K., R. Kozopas, and W. H. Hyatt. 1979. Consideration of entrainment of larval fish by a St. Clair River, Ontario, Canada power station. Canadian Fisheries Marine Service Technical Report No. 868:1-25.

Original not reviewed.

KEY WORDS: BEHAVIOR; MOVEMENTS.

329. LeSuer, C. A. 1817. Description of two new species of the genus *Gadus*. *Journal of Academic Natural Science*, Philadelphia. 1(1):83-85.

Original not reviewed. This article is reportedly an early discussion of burbot classification.

KEY WORDS: CLASSIFICATION.

330. Lilley, J. W. 1975. Aquatic resources summary for Willowlake River, River Between Two Mountains, Hare Indian, Travailant and Rengleng Rivers, NT. Canadian Department of the Environment, Fisheries and Marine Service, Central Region, Data Report Series No. Cen/D-75-6:29p.

This report presents preliminary investigations and baseline sampling of five tributary river systems to the Mackenzie River. Burbot presence is noted.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

331. Lind, E. A., and J. Turunen. 1971. Pond populations of fishes studied by a multiple mark-recapture method. *Luonnon Tutkija* 75(2):29-35.

Original not reviewed.

KEY WORDS: POPULATION DYNAMICS.

332. Lind, E. A., P. Hytilkoski, E. Kaukoranta, and O. Kukko. 1973. Mateen, *Lota lota*, Populaatiota Kenteesta Ovlujoen Svistossa. (Population structure of the burbot, *Lota lota* (L.), in the outlet of the Ovlukoki River). Ichthyol. Fenn. Borealis 3:55-90.

Original not reviewed.

KEY WORDS: AGE AND GROWTH; POPULATION DYNAMICS.

333. Lindsay, R. C., D. A. Stuiber, B. Stewart, and V. L. Carlson. 1981. Evaluation of burbot, *Lota lota*, acceptability for processing. Canadian Institute of Food Technology Journal 14(3):196-202.

Original not reviewed. This article reportedly describes processing of burbot as food. From Lakes Michigan and Superior, burbot yielded approximately 35% total fillets, with higher quality anterior sections limited to 15-20%. Storage mechanisms are evaluated.

KEY WORDS: UTILIZATION.

334. Lindsey, C. C. 1956. Distribution and taxonomy of fishes in the Mackenzie drainage of British Columbia. Journal of the Fisheries Research Board of Canada 13(6):759-789.

Original not reviewed. This article reportedly discusses adaptation of burbot to cold, brackish water conditions. The author concludes that insufficient evidence exists for subspecific distinctions of burbot.

KEY WORDS: BEHAVIOR; CLASSIFICATION; PHYSIOLOGY.

335. Lindsey, C. C., K. Patalas, R. A. Bodaly, and C. P. Archibald. 1981. Glaciation and the physical, chemical and biological limnology of Yukon lakes. Canadian Technical Report of Fisheries and Aquatic Sciences 966:37p.

This report contains a preliminary limnological characterization of 91 Yukon lakes and presents data on lake morphometry, temperature, chemical composition, zooplankton species presence and abundance, and fish species presence. Summaries by drainage with specific notes on water bodies sampled are presented.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

336. Linnaeus, C. 1758. *Systema naturae sive regna tria naturae, systematice proposita per classes, ordines, genera et species, cum characteribus, differentiis, synonymis, locis, etc.* Vol. 1. Regnum animale. 10th ed. revised. Holmiae:824p.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

337. Lloyd, A. J. 1938. Occurrence of burbot in the estuary of the Severn. *Nature* 142(3608):1118-1119.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

338. Lodenius, M., A. Seppanen, and M. Herranen. 1983. Accumulation of mercury in fish and man from reservoirs in northern Finland. *Water, Air, and Soil Pollution* 19(3):237-246.

Original not reviewed. This article reportedly discusses mercury concentrations in burbot in lakes in northern Finland.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

339. Lovett, R. J., W. H. Gutenmann, I. S. Pakkala, I. S. Youngs, D. J. Lisk, G. C. Burdick, and E. T. Harris. 1972. A survey of the total cadmium content of 406 fish from 49 New York State waters. *Journal of the Fisheries Research Board of Canada* 29(9):1283-1290.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

340. MacKay, H. H. 1957. The burbot (*Lota lota*). *Sylva* 13(4):25-31.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

341. MacKay, H. H. 1963. *Fishes of Ontario*. Toronto, ON: Ontario Department of Lands and Forests:p. 211-215.

This report provides a general species description of burbot including distribution, habitat, habits, food, harvest, age, growth, and economic value.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MANAGEMENT; MOVEMENTS; REPRODUCTION; SPECIES DESCRIPTION.

342. Magnin, E. 1977. Ecologie des eaux douces du territoire de la Baie-James. Montreal, PQ: Societe d'Energie de la Baie-James:454p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

343. Magnin, E., and C. Fradette. 1977. Croissance et regime alimentaire de la lotte *Lota lota* (Linnaeus 1758) dans divers lacs et rivieres du Quebec. Growth and diet of the burbot, *Lota lota* (Linnaeus, 1758) in several lakes and rivers of Quebec. Naturaliste Canada 104(3):207-222.

This study documents age and growth and food habits of burbot from several drainage basins in Quebec. A comparison of these data with other worldwide sources is presented.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION; FEEDING.

344. Mai, J., J. K. Shetty, T.-M. Kan, and J. E. Kinsella. 1980. Protein and amino acid composition of select freshwater fish. Journal of Agricultural and Food Chemistry 28(4):884-885.

Original not reviewed. This article reportedly discusses the protein content and amino acid composition of burbot.

KEY WORDS: PHYSIOLOGY.

345. Malinin, L. K. 1971. Povedeniye nalima. (Behavior of burbot). Priroda (Nature) 8:77-79. Translated from Russian: Fisheries Research Board of Canada, Translation Series No. 2171:8p.

Tagging of burbot in streams was performed during September with ultrasonic transmitters. Burbot moved mainly at night (activities peaked from 10 p.m. to 1 a.m.). Fish stayed mainly in the deepest channels. Migration speeds were uniform, rarely exceeding 10 meters per minute. Burbot displaced downstream returned to the point of capture; those

released upstream often did not. Aquarium studies of vision, smell, and vibrations indicate smell and movement lead burbot to prey.

KEY WORDS: BEHAVIOR; FEEDING; MOVEMENTS; PHYSIOLOGY.

346. Mansfield, P. A., D. J. Jude, D. T. Michaud, D. C. Brazo, and J. Gulvas. 1983. Distribution and abundance of larval burbot and deepwater sculpin in Lake Michigan. Transactions of the American Fisheries Society 112(2 Part A):162-172.

This paper presents data on nearshore burbot and sculpin distribution in Lake Michigan. Burbot larvae (3.0-7.5 mm) occurred from late March until mid-June at optimum water temperatures of 6-12½ C. Larvae were sampled from the 0.5 to 13.5 m depth strata. Densities are presented for various locations.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

347. Manter, H. W. 1955. The zoogeography of trematodes of marine fishes. Experimental Parasitology 4(1):62-86.

Original not reviewed. This article reportedly infers the marine origin of burbot by the presence of marine parasites.

KEY WORDS: PARASITES AND DISEASE; SPECIES DESCRIPTION.

348. March, B. E., J. Biely, E. G. Bligh, and Lantz. 1967. Composition and nutritive value of meals from alewife, sheepshead, maria, and tullibe. Journal of the Fisheries Research Board of Canada 24(6):1291-1298.

Original not reviewed.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

349. Margolis, L., and J. R. Arthur. 1979. Synopsis of the parasites of fishes of Canada. Bulletin of the Fisheries Research Board of Canada 199:269p.

This publication contains information on the parasites of Canadian fishes. An extensive list of burbot parasites is presented.

KEY WORDS: PARASITES AND DISEASE.

350. Markun, M. I. 1936. Contribution to the system and biology of burbot from the Kama River. Bull. Biol. Inst., Perm Univ. 10:211-237.

Original not reviewed. This article reportedly discusses burbot classification and morphology in Russia.

KEY WORDS: CLASSIFICATION; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY.

351. Marlborough, D. 1970. The status of the burbot, *Lota lota* (L.) (Gadidae) in Britain. *Journal of Fisheries Biology* 2(3):217-222.

Original not reviewed. This article reportedly presents data on burbot distribution and effects of pollution.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

352. Marshall, N. B. 1966. The life of fishes. St. Louis, MO: Universe Books:p. 114-126.

Original not reviewed. The author reportedly discusses brackish water habitat of burbot in Finland.

KEY WORDS: BEHAVIOR; GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

353. Martin, W. R. 1941. Rate of growth of the ling, *Lota lota maculosa* (LeSueur). *Transactions of the American Fisheries Society* 70(1941):77-79.

Martin provides validation of the otolith as an aging structure in burbot in Lake Opeongo, Ontario. Clear zones in the otolith were considered to have occurred during summer growth.

KEY WORDS: AGE AND GROWTH; PHYSIOLOGY.

354. Martin, D. J., D. R. Glass, C. J. Whitmus, C. A. Simenstad, D. A. Milward, E. C. Volk, M. L. Stevenson, P. Nunes, M. Savoie, and R. A. Grotefendt. 1986. Distribution, seasonal abundance, and feeding dependencies of juvenile salmon and non-salmonid fishes in the Yukon River Delta. Anchorage, AK: National Oceanic and Atmospheric Administration, Ocean Assessment Division, Final Report Contract No. 84-ABC-00178:386p.

This paper describes the results of an extensive fisheries study conducted in the vicinity of the mouth of the Yukon River in areas associated with potential environmental impact from oil and gas leases. Burbot were captured in numerous freshwater locations. Growth, location, habitat preferences, and food preferences were studied.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC
DISTRIBUTION; MOVEMENTS.

355. Mattingly, R. 1976. Great Lakes fish cookery. Michigan State
University Cooperative Extension Service Bulletin E-932,
Natural Resource Series:5p.

Original not reviewed. Reportedly lists preparation methods for burbot.

KEY WORDS: UTILIZATION.

356. McAllister, D. E. 1975. Fish collections from the Otish Mountain
Region, Central Quebec, Canada. Ottawa, ON: National Museum
of Natural Sciences, Syllogeus No. 8:12p.

This paper describes burbot distribution in central Quebec's lakes and
streams.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

357. McCray, E. Ward. 1952. Kootenay Ling. Field and Stream, Dec. 1952
57(8):p. 40-41, 110-111.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

358. McCrimmon, H. R., and O. E. Devitt. 1954. Winter studies on the
burbot, *Lota lota lacustris*, of Lake Simcoe, Ontario.
Canadian Fish Culturist 16:34-41.

This paper discusses age and growth, food habits, spawning, and maturity
of burbot. Fish were captured with hoop traps set in tributary streams to
the lake. Burbot were thought to have spawned in the lake, however.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING;
REPRODUCTION; UTILIZATION.

359. McCrimmon, H. R. 1956. Fishing in Lake Simcoe. Publication of the
Ontario Department of Lands and Forests:p. 128.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

360. McCrimmon, H. R. 1959. Observations on spawning of burbot in Lake Simcoe, Ontario. *Journal of Wildlife Management* 23(4):447-449.

This paper presents observations on the time, place, and other factors related to the reproduction of burbot in Lake Simcoe. Included are notes on successful hatchery culture.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; GEOGRAPHIC DISTRIBUTION; HATCHERY CULTURE; MOVEMENTS; REPRODUCTION.

361. McIntosh, W. C., and E. E. Prince. 1890. On the development and life histories of the teleostean food-and other fishes. *Transactions of the Royal Society, Edinburgh* 35(19):665-946.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

362. McLean, R. F., and K. J. Delaney. 1978. Alaska's fisheries atlas. Juneau, AK: Alaska Department of Fish and Game. Volume 2.

This publication presents brief life history information, species distribution, fishery statistics, and includes maps displaying known species distribution and spawning areas.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; SPECIES DESCRIPTION.

363. McPhail, J. D., and C. C. Lindsey. 1970. Freshwater fishes of Northwestern Canada and Alaska. Ottawa, ON: Fisheries Research Board of Canada, Bulletin 173:p. 44, 295-300.

This book provides a comprehensive review of the distinguishing characteristics, description, distribution, taxonomy, geographic distribution, biology, and utilization of burbot and other freshwater fish.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MORPHOLOGY; REPRODUCTION; SPECIES DESCRIPTION; UTILIZATION.

364. Melnikov, N. 1866. Ueber die Verbreitungsweise der Gefasse in den Hauten des Darmkanals de *Lota vulgaris*. *Archiv fur Anatomie, Physiologie and Wissenschaftlichen Medizin*, 1866:p. 587-91.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

365. Meshkov, M. M. 1967. Developmental stages of the burbot (*Lota lota* L.). *Voprosy Ikhtiologii* 62:181-194. Toronto, ON: University of Toronto, Zoology reprint Library:26p.

Original not reviewed. The ecology of young of the year burbot in Chudskoye Reservoir, Russia is reportedly discussed in this publication.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION; FEEDING; MOVEMENTS.

366. Metsker, H. 1967. Iliamna Lake watershed freshwater commercial fisheries investigation of 1964. Alaska Department of Fish and Game, Informational Leaflet No. 95:50p.

The incidental catch of burbot during an experimental winter fishery is described in this paper.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; UTILIZATION.

367. Mezhnin, F. I. 1975. Interrenal tissue of the burbot, *Lota lota*, during spawning. *Journal of Ichthyology* 15(2):279-284.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

368. Milewski, A. 1941. Aus dem Leben der Quappe (*Lota lota* L. - *Lota vulgaris*). *Wochenschrift fur Aquarien-und Terrarienkunde* 11:p. 237-240.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

369. Miller, B. 1974. The ling. *Montana Outdoors*, November-December:p. 27-29.

Original not reviewed. Recipes for burbot are reportedly presented.

KEY WORDS: UTILIZATION.

370. Miller, D. D. 1970a. A life history study of burbot in Boysen Reservoir, Ring Lake and Trail Lake. Wyoming Game and Fish Commission, Cooperative Research Project No. 5, Part 1:56p.

Original not reviewed.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MANAGEMENT; POPULATION DYNAMICS; REPRODUCTION.

371. Miller, D. D. 1970b. A life history study of burbot in Ocean Lake and Torrey Creek, Wyoming. Wyoming Game and Fish Commission, Cooperative Research Project No. 5, Part 2:97p.

This publication presents basic life history information of burbot and physical/chemical features of two aquatic systems. Capture methods, age, growth, food habits, spawning, reproduction, tagging data, parasites, physiological parameters, harvest, and fishery values are discussed. Hatchery culture was investigated.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; HATCHERY CULTURE; MANAGEMENT; MOVEMENTS; PARASITES & DISEASE; POPULATION DYNAMICS; REPRODUCTION; SPECIES DESCRIPTION.

372. Miller, N. J. 1971. Rough and detrimental fish removal-1970. Wisconsin Department of Natural Resources:14p.

Original not reviewed. Burbot removal in state waters is reportedly documented.

KEY WORDS: CAPTURE METHODS, HARVEST.

373. Mills, C. A., and A. Eloranta. 1985. The biology of Phoxinus-Phoxinus and other littoral zone fishes in Lake Konnevesi, central Finland. *Annales Zoologici Fennici* 22(1):1-12.

Original not reviewed. This article reportedly discusses the results of electrofishing surveys during which species composition, numerical dominance, and total biomass were estimated for burbot and other species.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS.

374. Mills, M. J. 1986. Alaska statewide sport fish harvest studies, 1985 data. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-10-1, Annual Performance Report 27(RT-2):137p.

Findings from a statewide postal survey of sport fishermen providing estimates of sport fishing effort and harvest by fisheries, areas, regions, and species are presented. Data from 1977 through 1985 is

included. Estimated statewide harvest of burbot ranged from 8,425 in 1977 to 27,230 in 1985.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

375. Milne, A. R., and B. D. Smiley. 1976. Offshore drilling for oil in the Beaufort Sea: a preliminary environmental assessment. Victoria, BC: Beaufort Sea Project, Department of Environment, Technical Report No. 39.

Original not reviewed. Utilization of fish species in northwestern Canada is reportedly discussed in this publication.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; UTILIZATION.

376. Mitenev, V. K. 1971. Novye I Maloizuchennye Vidy Mikrosporidiy Iz Ryb Kol'Skogo Poluostrova. (New and little-known species of microsporida from the fish of the Kola Peninsula). Parazitologiya 5(6):551-558.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

377. Mittl'man, S. Ya. 1925. The fat content of the cod and a new method of processing "voyuksy." Izv. Gos. inst. opytn. agronomii, 3, No. 1.

Original not reviewed. This publication reportedly discusses fat content of burbot livers.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

378. Moore, H. F. 1917. The burbot. U.S. Bureau of Fisheries, Economic Circular No. 25:4p.

This publication is an early general species description of burbot. Recipes for home food preparation are presented.

KEY WORDS: SPECIES DESCRIPTION; UTILIZATION.

379. Moore, H. H., and R. A. Braem. 1965. Distribution of fishes in U.S. streams tributary to Lake Superior. U.S. Fish and Wildlife Service, Special Scientific Report 516:61p.

Original not reviewed. Burbot presence in these tributary streams is reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

380. Moravec, F. 1969. Observations on the development of *Camallanus Lacustris* (Zoega, 1767) (Nematoda:Camallanidae). Vestnik Ceskoslovenske Spolecnosti Zoologicke 33(1):15-33.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

381. Moreau, G., and L. Legenore. 1979. Relation between habitat and fish populations: attempt at defining a numerical method for northern rivers. Hydrobiologia 67(1):81-88.

Original not reviewed.

KEY WORDS: POPULATION DYNAMICS.

382. Morrow, J. E. 1980. The freshwater fishes of Alaska. Anchorage, AK: Alaska Northwest Publishing Company:248p.

This book provides a general taxonomic and species description of Alaska freshwater fish, including burbot.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MORPHOLOGY; MOVEMENTS; REPRODUCTION; SPECIES DESCRIPTION; UTILIZATION.

383. Muller, W. 1960. Beitrage zur Biologie der Quappe (*Lota lota* L.) nach Untersuchungen in den Gewassen zwischen Elbe und Oder. Zeitschrift fuer Fischerei 9(1,2):1-72.

Original not reviewed. This article reportedly provides a comprehensive study of European burbot.

KEY WORDS: FEEDING; GEOGRAPHIC DISTRIBUTION; REPRODUCTION; SPECIES DESCRIPTION.

384. Muller, W. 1960. Latest studies on the burbot (*Lota lota* L.). St. Johns, NF: Fisheries Research Board of Canada Translation Service 1828:10p. Deutsche Fischerei Zeitung 8(7):43-47.

Original not reviewed. This article reportedly summarizes some European burbot studies.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

385. Mueller, K. 1973. Seasonal phase shift and duration of activity time in the burbot, *Lota lota* (L.), (Pisces, Gadidae). *Journal of Comparative Physiology* 84(4):357-359.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

386. Mueller, K., and Oesterdahl, L. 1970. Observations on the spawning of the eelpout, *Lota lota* L. *Oikos* (Supplement 13):130-133.

Original not reviewed.

KEY WORDS: REPRODUCTION.

387. Mueller, K. 1982. Seaward migration of juvenile fish species to the Bothnian Sea. *Archiv fuer Hydrobiologie* 95 (1-4):p. 271-282.

Original not reviewed. This paper reportedly documents a burbot migration up a coastal tributary to the oligohaline northern Bothnian Sea for spawning. An adult post-spawning downstream migration is noted, as is a later similar pattern for juveniles.

KEY WORDS: MOVEMENTS; REPRODUCTION.

388. Mujib, K. A. 1967. The cranial osteology of the Gadidae. *Journal of the Fisheries Research Board of Canada* 24(6):1315-1375.

Original not reviewed.

KEY WORDS: MORPHOLOGY.

389. Muller, K. 1969. Nachweis Circanualer Periodia Bei Der Quappe (*Lota lota* L.) Pisces, Gadidae). (Evidence for diurnal periodicity in burbot, *Lota lota* (Pisces, Gadidae). *Experientia* 25(12):1268-1269.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

390. Muller, K. 1970. Phasenwechsel Der Lokomotorischen Aktivitaet Bei Der Quappe *Lota lota* L. (Phase change of the locomotor activity of the eelpout, *Lota lota* L.). *Oikos* (Supplement 13):122-129.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

391. Muller, K. 1972. Messaurestationen, Presentatition, Malsattning Och Nagra Resultat Av Biorytmikforskningen. (Presentation, purpose, and some results of biorhythmic research.). *Fauna och Flora* 67(5):186-190.

Original not reviewed.

KEY WORDS: BEHAVIOR.

392. Muller, K., and K. Schreiber. 1967. Eine Methode Zur Messung Der Lokomotorischen Aktivitat Von Susswasserfischen. (A method for the measurement of locomotory activity of fresh-water fish.). *Oikos* 18(1):135-136.

Original not reviewed.

KEY WORDS: BEHAVIOR; PHYSIOLOGY.

393. Muller, K. 1983. Lunar periodicity of seaward migrating juvenile burbot. A short communication. *Aquilo* 22:147-148.

Original not reviewed.

KEY WORDS: BEHAVIOR; MOVEMENTS.

394. Murdoch, John. 1885. Fishes. In: A Report of the International Polar Expedition to Point Barrow, Alaska in Response to the Resolution of the House of Representatives of Dec. 11, 1884, Part 3:p. 129-32.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

395. Musial, C. J., J. F. Uthe, R. J. Wiseman, and R. A. Matheson. 1979. Occurrence of PCB residues in burbot, *Lota lota*, and lake trout, *Salvelinus namaycush*, from the Churchill Falls power development area. Bulletin of Environmental Contamination and Ecology 23(1,2):256-261.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

396. Muth, K. M. 1973. Population dynamics and life history of burbot, *Lota lota* (Linnaeus), in Lake of the Woods, Minnesota. University of Minnesota. Available from: University Microfilms International, Ann Arbor, MI; Publication No. 74-10, 554. 164p.

This thesis is a comprehensive review of burbot information collected from Lake of the Woods from 1968 to 1972. Age and growth, behavior, capture methods, food preferences, harvest levels in the commercial fishery, hatchery culture methods, movement trends, dynamic population parameters, reproductive behavior, and comparisons of the collected data with that of other authors are discussed.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING; HARVEST; HATCHERY CULTURE; MOVEMENTS; POPULATION DYNAMICS; REPRODUCTION; SPECIES DESCRIPTION.

397. Muth, K. M., and L. L. Smith, Jr. 1974. The burbot fishery in Lake of the Woods. University of Minnesota, Agricultural Experiment Station, Technical Bulletin 296-1974:68p.

This paper is similar in content and subject matter to Muth (1973). Population dynamics and management recommendations for commercial harvest levels are discussed more thoroughly.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING; HARVEST; HATCHERY CULTURE; MANAGEMENT; MOVEMENTS; POPULATION DYNAMICS; REPRODUCTION; SPECIES DESCRIPTION.

398. Muus, B. J., and P. Dahlstrom. 1971. Collins guide to the freshwater fishes of Britain and Europe. London: Collins:222p.

Original not reviewed. Age and growth data for burbot are reportedly presented in this publication.

KEY WORDS: AGE AND GROWTH; DISTRIBUTION.

399. Nagy, S. 1985. The food of burbot (*Lota lota*, L.) in the Turiec River. *Zivocisna Vyroba* 30(10):943-952.

Original not reviewed. This article reportedly documents food preferences of burbot in relation to food competition with huchen in the investigated river segment.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING.

400. Namtvedt, T. B. 1970. Inventory and cataloging of the sport fish and sport fish waters in Interior Alaska. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-2, Annual Report of Progress 11(15-A):p. 273, 276-278.

Initial investigations into the age and growth of burbot and the fishery potential of Harding Lake near Fairbanks is presented.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST.

401. Nazarov, L. A. 1968. Concerning the mechanism of excitation of olfactory receptors in fishes. *Fiziol. ZH. SSSR Im I. M. Sechenova* 54(7):824-831.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

402. Nazarov, L. A. 1969. Mechanism of stimulation of the olfactory receptors in fish. *Neuroscience Translations* (1968-69) 7:768-774.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

403. Nelichik, V. A. 1973. The burbot (*Lota lota* (L.) of the Upper Tuloma Reservoir. *Journal of Ichthyology* 13(6):834-840.

This paper presents data on age and growth, harvest, morphology, fat content, food preferences, parasites, and population dynamics of burbot.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MANAGEMENT; MORPHOLOGY; PARASITES AND DISEASE; PHYSIOLOGY; POPULATION DYNAMICS.

404. Nelichik, V. A. 1978. Morphometric features of the burbot, *Lota lota*, of the Upper Tuloma Reservoir. *Journal of Ichthyology* 18(5):756-764.

The author presents morphological data supporting his contention of two ecological forms of burbot (a lake form and a lake-river form) in the above water body.

KEY WORDS: CLASSIFICATION; MORPHOLOGY.

405. Nelson, E. M., C. D. Tolle, and G. S. Jamieson. 1932. Chemical and physical properties of burbot-liver oil and its vitamin content. U.S. Department of Commerce, Bureau of Fisheries Investigative Report 1(12):6p.

This paper describes harvest data for the Great Lakes and discusses physical and chemical properties of the oil rendered from burbot livers.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

406. Nelson, J. S. 1965. Effects of fish introduction and hydroelectric development on fishes in the Kananaskis River. *Journal of the Fisheries Research Board of Canada* 22(3):721-753.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

407. Nelson, W. R. 1980. Ecology of larval fishes in Lake Oahe, South Dakota USA. U.S. Fish and Wildlife Service Technical Paper No. 10:p. 1-18.

Original not reviewed. The author reportedly presents data on time, location, food, and habitats used as nursery areas by young-of-the-year fish, including burbot. Fish survival was related to reservoir water levels more than food availability.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING; REPRODUCTION.

408. Netsch, N. F. 1975. Fishery resources of waters along the route of the Trans-Alaska pipeline between Yukon River and Atigun Pass in north central Alaska. Washington, DC: U.S. Fish and Wildlife Service, Resource Publication 124:45p.

This paper describes burbot presence in water bodies along the Trans-Alaska Oil pipeline route prior to construction.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

409. Netsch, N., E. Crateau, G. Love, and N. Swanton. 1977. Freshwater fisheries reconnaissance of the coastal plain of the National Petroleum Reserve - Alaska (NPR-A), July and August, 1977, preliminary report. Anchorage, AK: U.S. Fish and Wildlife Service:214p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

410. Nicholson, H. F. 1986. Bibliography on the limnology and fisheries of Canadian freshwaters, Appendix A (revised). Author Index Nos. 1-6000. Burlington, ON: Fisheries and Oceans, Great Lakes Fisheries Research Branch (Unpublished).

This is an unpublished report superseding Technical Report No. 605, containing an author index. An amended version of the Numerical Index (Nos. 1-6000) is reportedly in preparation.

KEY WORDS: SPECIES DESCRIPTION.

411. Nikolsky, G. V. 1956. Fishes from the Amur basin. Acad. Nauk SSSR:551p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

412. Nikolsky, G. V. 1961. Special Ichthyology. Israel Program for Scientific Translations, 2nd ed.:538p.

Original not reviewed. The author reportedly discusses burbot utilization in Siberia.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; UTILIZATION.

413. Nikolsky, G. V. 1963. The ecology of fishes. London and New York: Academic Press:352p.

The author briefly discusses oxygen and metabolic demands, aging structures, and morphological features of burbot.

KEY WORDS: AGE AND GROWTH; FEEDING; PHYSIOLOGY.

414. Nordqvist, O. F. 1904. Stor Lake Ueber ein Grosses Exemplar von *Lota vulgaris*. Fiskeritidskr. Finland 13:p. 29-30.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

415. Normandeau, P. A. 1969. Life history and ecology of the round whitefish, *Prosopium cylindraceum* (Pallas), of Newfoundland Lake, Bristol, New Hampshire. Transactions of the American Fisheries Society 98:7-13.

Original not reviewed. This article reportedly discusses feeding by burbot on whitefish eggs.

KEY WORDS: FEEDING.

416. Novikov, A. S. 1966. Fishes from the Kolyma River basin. Acad. Nauk SSSR:98-100.

Original not reviewed. The author reportedly discusses burbot distribution.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

417. Numann, W. 1940. Untersuchungen ueber die biologie einiger Bodenseefische in den Uferregion und den Randgebiet des freien Sees. Zeitschrift Fischerei 37(5):637-688.

Original not reviewed. This article reportedly discusses burbot harvest and reproduction.

KEY WORDS: HARVEST; REPRODUCTION.

418. Numann, W. 1972. The Bodensee: effects of exploitation and eutrophication on the salmonid community. Journal of the Fisheries Research Board of Canada 29(6):883-847.

Original not reviewed. This article reportedly discusses marketing of burbot in Europe.

KEY WORDS: HARVEST; UTILIZATION.

419. Nurnberger, P. K. 1930. The plant and animal food of the fishes of Big Sandy Lake. Transactions of the American Fisheries Society 60:253-259.

Original not reviewed. This article reportedly discusses burbot food habits.

KEY WORDS: FEEDING.

420. Odell, T. T. 1932. The depth distribution of certain species of fish in some of the lakes of New York. Transactions of the American Fisheries Society 62:333.

Original not reviewed. This article reportedly discusses depth distribution and behavior of burbot.

KEY WORDS: BEHAVIOR; MOVEMENTS.

421. Odense, P. H., T. C. Leving, and Y. M. Macdougall. 1971. Polymorphism of lactose dehydrogenase in some ganoid species. Rapports et Proces-Verbaux des Reunions Conseil International pour l'Exploration de la Mer 161:75-79.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

422. Odenwall, E. 1927. Fiskfaunan i Lappajarvi sjo. Acta Societatis pro Fauna et Flora Fennica 56(13):637-688.

Original not reviewed. This article reportedly discusses age and growth of European burbot.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION.

423. Oliva, O., and V. Skorepa. 1969. The eye muscle in cod, *Gadus morhua callarias* (Linnaeus), and burbot, *Lota lota* (Linnaeus). Vestnik Ceskoslovenske Spolecnosti Zoologicke 33(1):34-39.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

424. Olson, S. 1946. Spawning of the eelpout. Minnesota Conservation Volunteer 9:43-44.

Original not reviewed.

KEY WORDS: BEHAVIOR; REPRODUCTION.

425. Ostrovnova, V. I. 1966. Population dynamics and the present state of *Lota lota* reserves in the Rybansk Reservoir. Trudy Instituta Biologii Vnutrennikh Vod Akademii Nauk SSSR 10(13):192-195.

Original not reviewed.

KEY WORDS: POPULATION DYNAMICS.

426. Oven, L. S. 1968. Characteristics of spawning of the Black Sea burbot. Gidrobiologicheskii Zhurnal 4(1):77-80.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

427. Paetz, M. J., and J. S. Nelson. 1970. The fishes of Alberta. Edmonton, AB: The Queen's Printer:281p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

428. Paetz, M. J., and K. A. Zelt. 1974. Studies of northern Alberta lakes and their fish populations. Journal of the Fisheries Research board of Canada 31:1007-1020.

This paper describes general burbot presence in four Alberta lakes: Cold, Lac La Biche, Lesser Slave and Wabamun.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

429. Pakkala, I. S., M. N. White, G. E. Povrdick, E. J. Harris, and D. J. Lisk. 1972. Residues in fish, wildlife, and estuaries. A survey of the lead content of fish from 49 New York State waters. Pesticides Monitoring Journal 5(4):348-355.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

430. Pavlov, D. S. 1959. Feeding of burbot, *Lota lota* L., under different illumination conditions. Nauchnye Doklady Vysshei Shkoly Biologicheskii Nauki 1959(4):42-45. St John's, NF: Translated from Russian; Fisheries Research Board of Canada Translation Service 1842:8p.

Original not reviewed.

KEY WORDS: FEEDING.

431. Pavlov, D. S., A. D. Machek, and S. N. Kapuspin. 1981. Daytime distribution of fish in a river based on under water observations. *Voprosy Ikhtiologii* 21(1):177-180.

Original not reviewed. This article reportedly documents burbot distribution in a portion of the Volga River.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; BEHAVIOR.

432. Pearse, A. S. 1921. The distribution of food of the fishes of three Wisconsin lakes in summer. *University of Wisconsin Studies in Science* 3:p. 1-61.

Original not reviewed.

KEY WORDS: FEEDING.

433. Pearse, G. A. 1975. Inventory and cataloging of the sport fish and sport fish waters of Interior Alaska - Tok District. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-7, Annual Report of Progress 16(G-I-J):p. 208-240.

This report provides limited documentation of burbot presence and distribution in lakes and streams between Tok and the Canadian border in eastern Alaska.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

434. Pearse, G. A. 1978. Inventory and cataloging of Interior (Alaska) waters with emphasis on the upper Yukon and the Haul Road areas. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-10, Annual Report of Progress 19(G-I-N):35p.

This report summarizes distribution and age and growth data of burbot in the Brooks Range north of Fairbanks.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION.

435. Pearse, G. A. 1979. Inventory and cataloging of Interior (Alaska) waters with emphasis on the upper Yukon and the Haul Road areas. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-11, Annual report of Progress 20(G-I-N):p.65-97.

This report summarizes available (1979) literature pertaining to fishery resources in northeastern Alaska.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION.

436. Pearse, G. A., and R. Conrad. 1986. Interior Burbot Study Part C: Hoop trap catch per unit effort standardization. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-10-1, Annual Performance Report 27(N-8-1):80p.

In Fielding Lake, Alaska, burbot catches in baited hoop traps were higher during night sets. Two net-night sets were selected as optimal. Traps set deeper than 20' caught more burbot than traps set shallower. Mean catch per set ranged from 1.58 to 2.58. Mortality due to embolism and temperature changes is discussed. In the Tanana River, traps rebaited and moved daily had the best catches.

KEY WORDS: BEHAVIOR; CAPTURE METHODS; MOVEMENTS; POPULATION DYNAMICS.

437. Peckham, R. D. 1983. Evaluation of Interior Alaska waters and sport fish with emphasis on managed waters-Delta district. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-15, Annual Performance Report 24(G-III-I):p. 23-31.

This report describes initial burbot creel census data from Fielding Lake, south of Delta Junction. Some length-weight and catch rate data is presented for the set line fishery.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

438. Peckham, R. D. 1985. Evaluation of Interior Alaska waters and sport fish with emphasis on managed waters-Delta District. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-17, Annual Performance Report 26(G-III-I):p. 51-54, 57-64.

This report discusses the progress of several burbot studies in waters south of Delta Junction. Age and growth information of burbot in George Lake is presented. The results of a sampling gear assessment study in Fielding Lake involving six types of traps and set lines indicated that

baited hoop traps had the highest catch per net night of lake burbot. Age and growth of captured burbot from Fielding Lake is summarized.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

439. Peckham, R. D. 1986. Interior Burbot Study Part B: Fielding Lake Burbot investigation. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-10-1, Annual Performance Report 27(N-8-1):29p.

This report describes estimates of population abundance, biomass, size and age composition, and sampling techniques developed in Alaskan waters. For Fielding Lake, abundance of fish over 275 mm was estimated at 1,761 (3.3 fish/ha). Burbot biomass was 2.0 kg/ha. Length frequencies and age and growth data are discussed. Baited hoop traps were the main capture tool. The effectiveness of electrofishing and fyke nets is discussed.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; MANAGEMENT; POPULATION DYNAMICS.

440. Peczalska, A., and W. Kraczkiewicz. 1969. Mietus (*Lota lota* L.) Z Zalewu Szczecinskiego. (Burbot, *Lota lota* L., from the firth of szczecin.). Pr. Morsk. Inst. Ryb. Gdynia 15:279-288.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

441. Penaz, M., F. Kubicek, P. Marven, and N. Zelivka. 1968. Influence of the Vir River Valley reservoir on the hydrobiologies and ichthyological conditions in the River Svratka. Acta Scientiarum Naturalium Academiae Scientiarum Bohemoslovacae BRNO 2(1):1-60.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

442. Penczak, T., E. Suszycka, and M. Molinski. 1982. Production consumption and energy transformation by fish populations in a small lowland river. Ekologia Polska 30(1-2):111-138.

Original not reviewed. This article reportedly estimates mean biomass, total production, energy consumption, and food conversion for several fish species, including burbot.

KEY WORDS: FEEDING; GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS.

443. Percy, R. 1975. Fishes of the outer Mackenzie Delta. Victoria, BC: Department of the Environment, Beaufort Sea Project, Technical Report No. 8:114p.

Original not reviewed. Existing knowledge of migration routes, timing, food habits, and life histories of several fish species, including burbot, are reportedly discussed in this report.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING; MOVEMENTS.

444. Peters, L., D. Cavis, and J. Robertson. 1977. Is *Diphyllbothrim latum* currently present in northern Michigan, USA? *Journal of Parasitology* 65(5):947-949.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

445. Pfeiffer, W. 1965. The size of the olfactory organ in the burbot, *Lota lota* L. (Pisces). *Canadian Journal of Zoology* 43(1):223-224.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

446. Pfeifer, W. 1977. Bibliography of the fishes of the Beaufort Sea. Fairbanks, AK: Biological Papers of the University of Alaska (17):76p.

This paper contains references dealing with fishes of the Beaufort Sea (Northern Alaska) and/or immediately adjacent regions, including selected Russian references.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

447. Pflieger, W. L. 1975. The fishes of Missouri. Missouri Department of Conservation:p. 30, 226-227.

A general species description for burbot in the state of Missouri is provided. Classification, distribution, habitat, and life history of burbot are discussed.

KEY WORDS: CLASSIFICATION; GEOGRAPHIC DISTRIBUTION; HARVEST; SPECIES DESCRIPTION.

448. Pikhu, E. H., and E. R. Pikhu. 1970. About the manner predatory fish ingest their prey. *Eesti Loodus* 1970:555-557.

Original not reviewed.

KEY WORDS: FEEDING.-

449. Pikhu, E. R. 1966. The importance of pike, perch, pike-perch, and burbot as biological control in Lake Peipsi-Pskov. *Hydrobiologia Uurim* 4:235-248.

Original not reviewed.

KEY WORDS: FEEDING.

450. Piironen, J., and H. Hyvaerinen. 1983. Composition of the milt of some teleost fishes. *Journal of Fisheries Biology* 22(3):351-361.

Original not reviewed. This article reportedly discusses the milt composition of burbot.

KEY WORDS: PHYSIOLOGY; REPRODUCTION.

451. Pikhu, E. H., and E. R. Pikhu. 1974. Feeding of the main predatory fish species of Pskovsky-Chudskoy water body. *Izvestiya Gosud Nauchno-Issled. Inst. Ozern. Rech. Rybn. Khoz.* 83:136-143.

Original not reviewed.

KEY WORDS: FEEDING.

452. Pikhu, E. H.,* and E. R. Pikhu. 1968. On the biology of the *Lota lota* in Pskovsk-Chudsk Lake. *Ikhthiol. Ozer. Ryb. Khoz. Meter. XI Kong. Vnutrenn. Vod. Pribell. Riga: Akad. Nauk Latv. SSSR Inst. Biol.*1(1):106-116.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

453. Pikhu, E. H., and E. R. Pikhu. 1969. Seasonal changes in feeding of pike-perch and burbot in the Pskov-Chudsk Lake. *Hydrobiology and fishery of inland waters of the Baltic. Hydrobiologia Uurim*:222-231.

Original not reviewed.

KEY WORDS: FEEDING.

454. Pikhu, E. H., and E. R. Pikhu. 1971. About the ways of swallowing the prey by predatory fish. *Eesti Nsv Teaduste Akadeemia Toimetised Biologia* 20(2):127-132.

Original not reviewed.

KEY WORDS: FEEDING.

455. Pileggi, J., and B. G. Thompson. 1976. Fishery statistics of the United States 1973. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service Statistical Digest No. 67:458p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

456. Pirozhnikov, P. L. 1968. Increasing the fish production of large reservoirs. *Problems in Ichthyology* 8(1):40-48.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

457. Pivnicka, K. 1966. Zur Systematik Der Quappe, *Lota lota* (Linnaeus, 1758). *Plastische Merkmale Der Europaischen. Muz. (Prir. Ved.)* 13:101-120.

Original not reviewed.

KEY WORDS: CLASSIFICATION; MORPHOLOGY.

458. Pivnicka, K. 1966. To the systematic of the burbot, *Lota lota* (Linnaeus, 1758). The meristic characters of the European burbot. *Acta Soc. Zool. Bohemoslov.* 30:168-178.

Original not reviewed. This article reportedly addresses burbot classification in Europe.

KEY WORDS: CLASSIFICATION; MORPHOLOGY.

459. Pivnicka, K. 1967. To the systematic of the burbot, *Lota lota* (Linnaeus, 1758). The plastic characters of the European burbot. Acta Rerum Naturalium Musei Nationalis Slovaci Bratislava 13:101-120.

Original not reviewed. This article reportedly addresses burbot classification in Europe.

KEY WORDS: CLASSIFICATION; MORPHOLOGY.

460. Pivnicka, K. 1970. Morphological variation in the burbot (*Lota lota*) and recognition of the subspecies: a review. Journal of the Fisheries Research Board of Canada 27(10):1757-1765.

The morphometric and meristic variations of the burbot, from 24 areas worldwide are compared. Two forms are identified: *Lota lota lota*, with a long, low caudal peduncle and high meristic values; and *Lota lota lacustris* (maculosa) with a short, high caudal peduncle and low meristic values. The author presumes the separation of the species into two subspecies is due to the origin and subsequent geographic dispersal associated with glaciation.

KEY WORDS: CLASSIFICATION; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; SPECIES DESCRIPTION.

461. Poddubnyi, A. G., L. N. Malinin, and V. G. Tereshchenko. 1985. Correlation between fish distribution in the pelagic zone and the bottom relief of open arms of Rybinsk Reservoir, Russian SFSR, USSR. Voprosy Ikhtiologii 25(6):933-941.

Original not reviewed. This paper reportedly establishes a correlation between characteristic elements of the relief of the reservoir bottom and the density of the pelagic fish, including burbot.

KEY WORDS: BEHAVIOR; GEOGRAPHIC DISTRIBUTION.

462. Popowa, N. I. 1971. Comparative morphology of olfactorius epithelium of some freshwater fishes. Izv. Adak. Nauk SSSR (Ser. Biol. Nauk) No. 10:123-130.

Original not reviewed.

KEY WORDS: MORPHOLOGY; PHYSIOLOGY.

463. Poulet, J. B. 1879. De La Lotte d'eau douce vivipare (*Lota vulgaris*) et de la periode d'interdiction de las peche. Rev. Savoisiene 20:p. 107.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

464. Preble, E. A. 1908. Fishes of the Athabaska-Mackenzie Region.
U.S. Biological Survey, North American Fauna 27:p. 502-515.

Original not reviewed. This article reportedly discusses brackish water burbot habitat.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

465. Prince, Edward E., and Andrew Halkett. 1906. The eggs of the
freshwater ling. Ottawa Naturalist 19(12):219-224.

Original not reviewed.

KEY WORDS: REPRODUCTION.

466. Privolnev, T. I. 1954. Physiological adaptations of fishes to new
conditions of existence. Trudy Soveshchaniy Ikhtiologicheskoi
Komissii (Akademii Nauk SSSR) 3:40-49.

Original not reviewed. This article reportedly discusses lethal oxygen
levels and other factors for burbot.

KEY WORDS: PHYSIOLOGY.

467. Pronin, N. M. 1969. The influence of plerocercoids of
Triaenophorus Nodulosus on blood indices of the burbot.
Parazitologiya 3:185-187.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

468. Pritchard, A. L. 1931. Taxonomic and life history studies of the
ciscos of Lake Ontario. Toronto, ON: University of Toronto
Studies No. 35, Publications of the Ontario Fisheries Research
Laboratory 41:p. 1-77.

Original not reviewed. This paper reportedly documents the eating of
semi-planktonic burbot eggs by ciscos.

KEY WORDS: REPRODUCTION; UTILIZATION.

469. Rab, P. 1986. Karotype of the European burbot, *Lota lota* (Gadidae). *Voprosy Ikhtiologii* 26(1):161-164.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

470. Rafinesque, C. S. 1818. Discoveries in natural history made during a journey through the western regions of the United States. *American Monthly Magazine and Critical Review* 3(5):354-356.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

471. Rapp, W. L. Von. 1854. Die Fische des Bodensee. Untersucht und Beschreiben:39p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

472. Rawson, D. S. 1930. The bottom fauna of Lake Simcoe and its role in the ecology of the lake. University of Toronto Studies. Publications of the Ontario Fisheries Research Laboratory No. 4:1-183.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

473. Rawson, D. S. 1951. Studies of the fish of Great Slave Lake. *Journal of the Fisheries Research Board of Canada* 8(4):207-240.

The author presents data on preliminary fish investigations of Great Slave Lake, 1944-47. Spatial and depth distribution, relative catch frequency, preliminary age, growth, and food habits are discussed for burbot.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; PARASITES AND DISEASE.

474. Rawson, D. S. 1959. Limnology and fisheries of Cree and Wollaston Lakes in Saskatchewan. Regina, SK: Saskatchewan Department of Natural Resources, Fisheries Report No. 4:73p.

Early fisheries investigations in these northern Canadian water bodies are discussed. Burbot were captured in limited numbers.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

475. Reinke, J., J. F. Uthe, and D. Jamieson. 1972. Organochloride pesticide residuals in commercially caught fish in Canada. *Pesticide Monitor Journal* 6:43-49.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

476. Richardson, J. 1823. Notices of the fishes: extracted from the appendix to Sir John Franklin's narrative of a journey to the shores of the polar sea. London, W. C., 24p., (also in the "Narrative", p. 705-728; also in *Mem. Vern. Nat. Hist. Soc. Edinburgh*, Vol. 5(1823-1824), p. 509-522.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

477. Richardson, J. 1936. *Fauna boreali-americana or the zoology of the northern parts of British America. Part 3, The Fish.* Richard Bentley, London:327p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

478. Roberge, M. M. 1984. A preliminary creel census and biological investigation of Dubawnt Lake, Northwest Territories, 1980. *Canadian Data Report of Fisheries and Aquatic Science*, No. 436:24p. Available from: Department of Fisheries and Oceans, Winnipeg, MB.

Original not reviewed. This paper reportedly discusses the results of a 1980 creel census, experimental gillnetting, and sampling program.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

479. Robins, C. R., and E. E. Jr. Deubler. 1955. The life history and systematic status of the burbot, *Lota lota lacustris* (Walbaum), in the Susquehanna River system. Albany, NY: New York State Museum and Science Service Circular No. 39:49p.

This is a comprehensive study of stream-dwelling burbot (1950-52) from New York state. Included are a general species description and distribution notes, habitat preferences, capture methods, life history, age and growth, behavior, food habits, classification notes, and utilization information. Also included is an extensive bibliography and text synthesis.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; MOVEMENTS; REPRODUCTION; SPECIES DESCRIPTION.

480. Roguski, E. A. 1970. Monitoring and evaluation of Arctic waters with emphasis on the North Slope drainages. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-2, Annual Report of Progress 11(15-C):p. 295-298.

This report includes information on lake and stream surveys conducted on Alaska's North Slope. Age and growth of burbot are discussed.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION.

481. Rostlund, E. 1952. Freshwater fish and fishing in native North America. University of California 9:313p.

Original not reviewed. Burbot geographic distribution is reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

482. Rowell, T. H. 1939. Conservation from a new angle. Account of burbot liver oil. Minnesota Conservationist 1939:19-20.

Original not reviewed.

KEY WORDS: UTILIZATION.

483. Rowell, T. H. 1947. Burbot--producer of vitamins. Minnesota Conservation Volunteer 10(July-August):18-20.

Original not reviewed.

KEY WORDS: UTILIZATION.

484. Rushinskaya, N. N., and A. A. Byzov. 1978. The nature of impulse activity on the surface of anterior portions of the fish olfactory bulb. Fiziologicheskii Zhurnal 64(12):1704-1710.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

485. Russell, R. 1980. A fisheries inventory of waters in the Lake Clark National Monument area. Juneau, AK: Alaska Department of Fish and Game, Sport Fish Division:197p.

This report presents burbot distribution in the Lake Clark National Monument and limited age, growth, and food preferences.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; UTILIZATION.

486. Ryan, P. M. 1980. Fishes of the Lower Churchill River, Labrador. St. John's, NF: Canadian Department of Fisheries and Oceans, Fisheries and Marine Service, Technical Report No. 922:189p.

This report describes surveys of the fish populations and water quality of the Lower Churchill River prior to water impoundment. CPUE (gillnet), age, growth, sex ratios, maturity, gear selection by size, mortality rates, and impoundment recommendations are discussed.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; MOVEMENTS; POPULATION DYNAMICS.

487. Rybicki, R. W. 1979. Assessment of underutilized anadromous fishes in the Great Lakes. Completion Report, Michigan Department of Natural Resources, Fisheries Division. Available from: Michigan Department of Natural Resources, Lansing, MI (USA).

Original not reviewed. This paper is reportedly a compilation of reports on fisheries investigations in the Great Lakes including biology, stock dynamics, and fishing gear assessment.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS; UTILIZATION.

488. Ryder, R. A., and S. R. Kerr. 1978. The adult walleye in the percid community - a niche definition based on feeding behavior and food specificity. In: Kendall, R. L., ed. Selected Coolwater Fishes of North America. Washington, DC: American Fisheries Society Special Publication 11:39-51.

The role of burbot as food items for adult walleyes in five lakes is discussed. Burbot feeding behavior is examined and related to nocturnal feeding by walleyes.

KEY WORDS: BEHAVIOR; FEEDING; MOVEMENTS; UTILIZATION.

489. Sandlund, O. T., L. Klyve, and T. F. Naesje. 1985. Growth, habitat and food of burbot, *Lota lota*, in Lake Mjosa, Norway. *Fauna (Oslo)* 38(2):37-43.

Original not reviewed. This paper reportedly discusses the gillnet capture, age and growth, depth of capture, maturity, preferred food items, and the position of the burbot in the lake ecosystem.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; MOVEMENTS; REPRODUCTION.

490. Sawchyn, W. W., and E. W. Kardash. 1976. Limnology and fisheries of 5 lakes, Brabant, Wierzycki, Dickens, Davis, Mclellan. Saskatoon, SK: Department of Tourism and Renewable Resources, Saskatchewan Fisheries Laboratory, Technical Report 76-7:136p.

Burbot presence and growth, gillnet capture rates, and food preferences are reported.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION.

491. Schlottke, E. 1939. Untersuchungen uber die Verdauungsfermente der Quapper (*Lota vulgaris* L.). *Fischerei* 37:381-394.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

492. Schwalme, K., W. C. Mackay, and D. Lindner. 1985. Suitability of vertical slot and Denil fishways for passing north-temperate nonsalmonid fish. *Canadian Journal of Fisheries and Aquatic Sciences* 42(11):1815-1822.

Original not reviewed. This paper reportedly assesses the suitability of fishways for passing a variety of fish species, including burbot.

KEY WORDS: BEHAVIOR; MOVEMENTS.

493. Scott, O.P., and F. A. J. Armstrong. 1972. Mercury concentration in relation to size in several species of freshwater fishes from Manitoba and Northwestern Ontario. *Journal of the Fisheries Research Board of Canada* 29(12):1685-1690.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

494. Scott, W. B., and E. J. Crossman. 1973. Freshwater fishes of Canada. Ottawa: Fisheries Research Board of Canada Bulletin 184:641-645.

This book provides a comprehensive general review of Freshwater fishes of Canada.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; CLASSIFICATION; FEEDING; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; MOVEMENTS; PARASITES AND DISEASE; REPRODUCTION; SPECIES DESCRIPTION; UTILIZATION.

495. Scruton, D. A. 1984. A survey of selected lakes in Labrador, Canada, with an assessment of lake status and sensitivity in relation to acid precipitation. Canadian Technical Report in Fisheries and Aquatic Science No. 1296:115p.

Original not reviewed. Reportedly, the results of lake surveys from eastern Canada during which chemical, limnological, and fisheries data were collected are discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

496. Sedlar, J. 1969. Sucasng stav zarybnesia povodia rieky nitrg. Biologicke Prace 15(2):1-78.

Original not reviewed. This paper reportedly discusses fish population dynamics in European streams.

KEY WORDS: POPULATION DYNAMICS.

497. Seeley, H. G. 1886. The freshwater fishes of Europe. London: Cassell and Co. Ltd.:444p.

Original not reviewed. The author reportedly discusses burbot spawning.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

498. Segerstrale, C. 1945. Leker laken (*Lota vulgaris*) i Finlands Kustvatten med intervaller sasom laxfisk? Memor. Soc. Fauna Flor. fenn. 21:74-76.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

499. Sergeyeu, R. S. 1959. Materials on the biology of the Rybinsk Reservoir burbot. Trudy Instituta Biologii Vodokhranilishcha Akademii Nauk SSSR 1(4).

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY.

500. Simon, J. R. 1946. Wyoming fishes. Wyoming Game and Fish Department Bulletin No. 4:129p.

Original not reviewed. This paper reportedly discusses burbot distribution and general life history.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

501. Sinclair, D. C., and M. A. Miles. 1969. The "Ling Dingers" of Kootenay Lake. Wildlife Review 5(4):22-23.

Original not reviewed. This paper reportedly describes a popular burbot sport fishery.

KEY WORDS: HARVEST.

502. Sisova-Kasatockina, O. A., and A. J. Dubovskaja. 1975. Proteinase activity in certain species parasitizing vertebrates of different classes. Acta Parasitologica Polonica 23(26-40):389-393.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

503. Skora, S. 1965. The burbot from the valley water reservoir of Goczalkovice. Acta Hydrobiologica 7(4):383-392.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

504. Skryabin, A. G. 1977. Fishes from the Bauntovskie Lakes of the Baikal area. Nauka Novosibirsk (USSR):232p.

Original not reviewed. The author reportedly deals with the results of studies of biological and morphological characteristics of burbot.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; UTILIZATION.

505. Smetanin, M. M., A. S. Strel'nikov, and V. G. Tereshchenko. 1983. Use of the information theory in analyzing the dynamics of fish catches in forming ecosystems. *Voprosy Ikhtiologii* 23(4):531-537.

Original not reviewed. The dynamics of fish catches in two Russian ecosystems that include burbot are reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS.

506. Smith, H. M. 1892. Report on an investigation of the fisheries of Lake Ontario. *Bulletin of the U.S. Fisheries Commission* 10 (1890):177-215.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

507. Smith, M. W., and R. S. Glesne. 1982. Aquatic studies on the north slope of the Arctic National Wildlife Refuge 1981 and 1982. Fairbanks, AK: U.S. Fish and Wildlife Service, Fishery Resources Progress Report No. FY83-1:71p.

This report documents capture of burbot in the Canning River.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

508. Smith, O. H., and J. Van Oosten. 1940. Tagging experiments with lake trout, whitefish, and other species of fish from Lake Michigan. *Transactions of the American Fisheries Society* 69(1940):63-83.

The results of early lake trout and burbot tagging experiments are presented. One burbot moved 75 miles at an average rate of 0.2 miles/day.

KEY WORDS: CAPTURE METHODS; MOVEMENTS.

509. Smith, S. H. 1968. Species succession and fishery exploitation in the Great Lakes. *Journal of the Fisheries Research Board of Canada* 25(4):657-666.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; POPULATION DYNAMICS.

510. Smith, S. H. 1970. Species interactions of the alewife in the Great Lakes. Transactions of the American Fisheries Society 99:754-765.

Original not reviewed. This paper reportedly discusses burbot feeding on whitefish.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING.

511. Snyder, D. E. 1979. Burbot-larval evidence for more than one North American species. In: Hoyt, R.D., ed., Proceedings of the third symposium on larval fish. Bowling Green, KY: Western Kentucky University 3:204-219.

Original not reviewed. The author reportedly found evidence for two burbot species, based upon larval pigmentation.

KEY WORDS: CLASSIFICATION; MORPHOLOGY.

512. Solem, J. O. 1973. Diel rhythm of fry and young of *Lota lota* (Pisces). Oikos 24(2):325-327.

Original not reviewed.

KEY WORDS: BEHAVIOR.

513. Solyus, A. A., D. G. Fleyschman, and V. G. Leont'Yev. 1970. GS-137 [SIC] concentration by the fishes of freshwater lakes. Journal of Ichthyology 10(6):827-832.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

514. Soot-Ryen, T. 1926. Bidrag til Kjendskabenom Finmarkens Ferskvandsfisker. (Contributions to the fresh-water fishes of Finland.). Tromso Museums Arshefter 48(1925)(2):46p.

Original not reviewed.

GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

515. Sorokin, V. N. 1968. *Biologiya Molodi Nalima Lota lota (L.)*. Biology of the young burbot, *Lota lota (L.)*. *Voprosy Ikhtiologii* 8(3):469-473. Translated from Russian: Scripta Technica, Inc: 5p.

Original not reviewed. The author reportedly discusses reproduction in burbot.

KEY WORDS: REPRODUCTION.

516. Sorokin, V. N. 1971. The spawning and spawning grounds of the burbot (*Lota lota (L.)*). *Journal of Ichthyology* 11(6):907-915.

Burbot spawning in Lake Baikal and Bugul'deyka and Kichera Rivers, Russia is summarized. Burbot migrate into lake tributaries in September and move up to 400 km upstream. Spawning occurs in early January to mid-February and post-spawning downstream movements are described. Egg dispersal, mortality, and development are noted.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS; REPRODUCTION.

517. Sorokina, A. A. 1977. Feeding of young fishes from the Selenga River area of Lake Baikal. *Nauka, Novosibirsk (USSR)*:112p.

Original not reviewed. The author reportedly discusses qualitative and quantitative feeding characteristics of burbot and other species.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING.

518. Speirs, J. Murray. 1952. Nomenclature of the channel catfish and the burbot of North America. *Copeia* (1952) No. 2:99-103.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

519. Stefanich, Frank A. 1952. The population and movements of fish in Prickley Bear Creek, Montana. *Transactions of the American Fisheries Society* 81(1951):260-274.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

520. Stein, J. N., C. S. Jessop, T. R. Porter, and K. T. J. Chang-Kue.
1973. Fish resources of the Mackenzie River valley, Interim
Report II. Winnipeg, MB: Department of the Environment,
Fisheries Service:260p.

This is an interim report detailing fisheries studies in the middle to lower Mackenzie River in northwestern Canada. Burbot distribution, catch frequencies, tagging and movement studies, migration routes and timing, spawning and nursery areas, age and growth, and food habits are discussed.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC
DISTRIBUTION; MOVEMENTS; REPRODUCTION.

521. Stickney, A. 1984. Coastal ecology and wild resource use in the central Bering Sea area: Hooper Bay and Kwigillingok. Juneau, AK: Alaska Department of Fish and Game, Division of Subsistence, Technical Paper No. 85:370p.

The author documents subsistence burbot harvest in southwestern Alaska.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; UTILIZATION.

522. Storer, D. H. 1842. Descriptions of two new species of fishes.
Boston Journal of Natural History 4 (1843-44)(1):58-62.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

523. Storer, D. H. 1844. Remarks on an unidentified species of *Lota* from Lake Winnipiseogee. Proceedings of the Boston Society of Natural History 1:20.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

524. Sundet, R. L., and M. N. Wenger. 1984. Resident fish distribution and population dynamics in the Susitna River below Devil Canyon. Anchorage, AK: Alaska Department of Fish and Game, Susitna Hydro Aquatic Studies Report Series 2(5):98p.

This report summarizes the progress of several studies associated with pre-construction of the Susitna Hydro Project in southcentral Alaska. Burbot were monitored with radio tags, studied for age and growth, and abundance estimated. Other reports in this study are either available or pending final editing.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION;
MOVEMENTS; POPULATION DYNAMICS.

525. Surber, T. 1920. A preliminary catalogue of the fishes and fish-like vertebrates of Minnesota. Appendix to Biennial Report of Minnesota State Game and Fish Commission (for the period ending June 30, 1920):p. 1-92.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

526. Surkov, S. S. 1966. A general description of the characteristics of species composition in the fish fauna of Murmansk Province. In: Ryby Murmanskoy oblasti. The fishes of Murmansk Province. Murmansk Book Press.

Original not reviewed. The author reportedly discusses burbot distribution in Russia.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

527. Svardson, G., and G. Molin. 1981. The impact of eutrophication and climate on a warm water fish community. Institute of Freshwater Research, Drottningholm. Report No. 59:142-151.

Original not reviewed. Gillnetting catches in Lake Hjalmarén, Sweden, over the period 1955-1978 are reportedly documented. Burbot catches are noted as are data on cultural eutrophication.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

528. Svetovidov, A. N. 1937. Ueber die Klassifikation des Gadiformes oder Anacanthini. Bull. de l'Acad. Sci. U.R.S.S., Ser. Biol. 4:1281-1288.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

529. Svetovidov, A. N. 1948. Fauna of the U.S.S.R.: Fishes; Gadiformes. Jerusalem: Israel Program for Scientific Translations; 1962. Walters, W. J. and Walters, V., translators. Fauna SSSR: Ryby; Treskoobraznye IX(4):304p.

The author discusses species life history, distribution, morphology and utilization.

KEY WORDS: AGE AND GROWTH; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; MORPHOLOGY; SPECIES DESCRIPTION.

530. Tache, A. A. 1870. Sketch of the north-west of America. Montreal, PQ. Translated from the French by J. Lovell.

Original not reviewed. Utilization of burbot as food is reportedly described.

KEY WORDS: UTILIZATION.

531. Tack, P. I., and H. Baeder. 1946. Fish recipes - burbot. Michigan State College, Agricultural Experiment Station, Folder 6.

Original not reviewed.

KEY WORDS: UTILIZATION.

532. Tack, P. I., R. Ingalls, J. F. Klocke, H. Baeder, D. C. Cederquist, E. Musser, and M. A. Ohlson. 1947. Preparation, utilization and vitamin concentrations of the burbot. Quarterly Bulletin, Michigan Agricultural Experimental Station 29:286.

Original not reviewed.

KEY WORDS: PHYSIOLOGY; UTILIZATION.

533. Tell, H. 1974. Parasites of the predatory fish of Lake Vortsjarv. *Hidrobiologia Uurim* 6:163-176.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

534. Terlecki, J., J. Szczerbowski, and A. Martyniak. 1977. Pokarm Leszcza, Krapia, Uklei I Ploci W Rzece Pisia Warminskiej. (Food of the bream, burbot, bleak and roach in the Pisa Warminski River). *Rocz. Nauk Roln., Ser. H*, 98(2):149-168.

Original not reviewed.

KEY WORDS: FEEDING.

535. Tesch, F. W. 1967. Aktivitat Und Verrhalten Wandernder *Lampetra fluviatilis*, *Lota lota* Und *Anguilla* Im Tidegebiet Der Elbe. (Activity and behavior of migrating *Lampetra fluviatilis*, *Lota lota* and *Anguilla anguilla* in the tidal area of the River Elbe). Helgolander Wiss Meeresuntersuch 16(12):92-111.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; BEHAVIOR; MOVEMENTS.

536. Thienemann, A. 1926. Freshwater fishes of Germany: a zoogeographic sketch. Stuttgart: Manual of Inland Fishery in Central Europe 3:1-31.

Original not reviewed. The author reportedly discusses burbot distribution in Europe.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

537. Thomas, D. C. 1982. The role of local fish and wildlife resources in the community of Shaktoolik, Alaska. Juneau, AK: Alaska Department of Fish and Game, Division of Subsistence, Technical Paper No. 13:312p.

This report documents subsistence harvest and use of burbot in western Alaska.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST; UTILIZATION.

538. Thornburgh, K. R. 1986a. Burbot distribution and relative abundance: Western and Interior Regions. In: Durr, B., ed. Alaska habitat management guide. Distribution, abundance, and human use of fish and wildlife: Western and Interior regions. Juneau, AK: Alaska Department of Fish and Game, Division of Habitat:p. 181-187.

This report discusses burbot regional distribution, seasonal use areas, factors affecting distribution, movements, and estimates of abundance.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MOVEMENTS; SPECIES DESCRIPTION.

539. Thornburgh, K. R. 1986b. Burbot life history and habitat requirements: Southcentral, Western and Interior Regions. In: Durr, B., ed. Alaska Habitat Management Guide. Life Histories and Habitat Requirements of Fish and Wildlife. Juneau, AK: Alaska Department of Fish and Game, Division of Habitat:p. 377-388.

This report describes range and burbot regional distribution, physical habitat requirements, nutritional requirements, reproductive characteristics, movements, and factors influencing populations.

KEY WORDS: BEHAVIOR; FEEDING; GEOGRAPHIC DISTRIBUTION; MOVEMENTS; PHYSIOLOGY; REPRODUCTION; SPECIES DESCRIPTION.

540. Tidd, W. M. 1932. The burbot as a source of a live material for parasite study. *School Science and Mathematics* 32(2).

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

541. Tidd, W. M., and R. V. Bangham. 1945. A new species of parasitic copepod, *Ergasilus osburni*, from the burbot. *Transactions of the American Microscopical Society* 64(3):225-27.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

542. Toivonen, J., H. Auvinen, and P. Valkeajaervi. 1982. Fish stock assessments in Lake Konnevesi. 30 years Jubilee Symposium of the Finnish Limnological Society: Lakes and Water Management, Helsinki (Finland) 22-23 Sep. 1980. *Hydrobiologia* 86(1-2):219-222.

Original not reviewed. The author reportedly documents yield and optimum exploitation levels for burbot and other species in Lake Konnevesi.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS.

543. Toner, G. C. 1937. Preliminary studies of the fishes of Eastern Ontario. *Bulletin of the Eastern Ontario Fish and Game Protective Assn., Supplement* 2:1-24.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

544. Trautman, M. B. 1957. The fishes of Ohio. Columbus: Ohio State University Press:683p.

Original not reviewed. The author reportedly describes burbot distribution in Oneida Lake.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

545. Trofimenko, V. Y. 1974. New data on Nematodes of the Genera *Cottocomephoronema* and *Comephoronema*-parasites of the Burbot. *Trydy Gel'Mint. Lab.* 24:199-207.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

546. Tsepkin, E. A. 1980. A contribution to the history of the commercial fish fauna and fishery in the middle reaches of the Angara. *Journal of Ichthyology* 20(3):131-134.

Original not reviewed. This article reportedly presents the results of a study of ancient fish bones recovered from cultural sites on the Angara River in Russia.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; UTILIZATION.

547. Tsepkin, E. A. 1985. History of the ichthyofauna of economic importance and the fishery in the Lena River Basin, Russian-SFSR, USSR. *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* 90(2):55-58.

Original not reviewed. The author reportedly documents the historical harvest based on fossil fish bones from excavations of paleo- and neolithic stands in the Lena River basin. Burbot were an important species in the harvest.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; HARVEST.

548. Tugarina, P. J., and V. M. Postnikov. 1970. Feeding and food correlation of fishes in Basin Ilirneisk-Anjuisk system (Chukotka). *Izvestiya Tikhookeanskogo Nauchno-Issled Ovatel'skogo Instituta Rybnogo Khozyaistva i Okeanografii* 71:259-282.

Original not reviewed.

KEY WORDS: FEEDING.

549. Tulpanov, M. A. 1967. The history of *Lota lota's* penetration into freshwaters. *Problemy Ecologii* 1:185-196.

Original not reviewed. This article reportedly discusses theoretical burbot behavior leading to a freshwater existence.

KEY WORDS: BEHAVIOR; GEOGRAPHIC DISTRIBUTION; MOVEMENTS.

550. Turner, L. M. 1886. Researches in Alaska, pt. 4, Fishes. In: Contributions to the natural history of Alaska. Results of investigations made chiefly in the Yukon District and the Aleutian Islands, conducted under the auspices of the Signal Service, United States Army, Extending from May 1874 to August 1881. Arctic Series Publications, Signal Service, U.S. Army, 2:p. 87-113.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

551. Tyul'Panov, M. A. 1972. Materials on the ecological and geographic variability of the burbot. Tr. Nauchno-Issled. Inst. Biol. Biofiz. Tomsk Univ. 2:102-110.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

552. Uthe, F. F. 1965. A new method of identifying various species of fish. Circular of the Fisheries Research Board of Canada 7:16-20.

Original not reviewed.

KEY WORDS: CLASSIFICATION; SPECIES DESCRIPTION.

553. Van Oosten, J., and H. J. Deason. 1938. The food of the lake trout (*Cristivomer namaycush namaycush*) and of the lawyer (*Lota maculosa*) of Lake Michigan. Transactions of the American Fisheries Society 67(1937):155-177.

Original not reviewed. This article reportedly describes food habits of lake trout and burbot from a sample of 1,538 stomachs taken in 1930-32. Fish (Cottidae and Coregonidae) comprised 74.3% of the samples; invertebrates the rest. Food competition with other species was discussed.

KEY WORDS: CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION.

554. Van Oosten, J., R. Hile, and F. W. Jobes. 1946. The whitefish fishery of Lakes Huron and Michigan with special reference to the deep-trap-net fishery. U.S. Fish and Wildlife Service, Fishery Bulletin No. 50:297-394.

Original not reviewed. This publication reportedly reviews seasonal movements of burbot and catch by depth for burbot in Lake Michigan.

KEY WORDS: CAPTURE METHODS; BEHAVIOR; GEOGRAPHIC DISTRIBUTION.

555. Vinberg, G. G. 1956. Metabolic rate and the nutritional requirements of fishes. Minsk: Belorussk University Press.

Original not reviewed. The author reportedly discusses rates of oxygen consumption of burbot.

KEY WORDS: PHYSIOLOGY.

556. Vladykov, V. D. 1972. Morphological differences in male gonads among nine genera of Gadidae (Pisces). Journal of the Fisheries Research Board of Canada 29(12):1709-1716.

Original not reviewed.

KEY WORDS: MORPHOLOGY; REPRODUCTION.

557. Volodin, V. M. 1965. The spawning place of *Lota lota* in the Rybinsk Reservoir. Trudy Instituta Biologii Vnutrennikh Vod Akademii Nauk SSSR 10(13):21-28. Translated from Russian: Memorial University of Nfld. Summary Translation, MSPL-Library Bulletin 4(6):2p.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; UTILIZATION.

558. Volodin, V. M. 1968. Plodovitost' Nalima (*Lota lota* L.) V Rybinskom Vodokhranilishche. (Fertility of the Burbot, *Lota lota* L. in the Rybinsk Reservoir). Akademiya Nauk SSSR, Institut Biologii Vnutrennikh Vod, Trudy, No. 17(20), "Nauka," Leningrad, 1968:p. 222-229. Howland, R. M., translator. Bureau of Sport Fishery and Wildlife, Translation No. 53(1969):14p.

This report provides a comprehensive discussion of burbot fertility and egg diameter versus fish age, size, and fatness. A literature review from Russian sources is included.

KEY WORDS: PHYSIOLOGY; REPRODUCTION.

559. Volodin, V. M., and M. N. Ivanova. 1968. *Obraz Zhizhni, Rost I Pitanie Molodi Nalima V Rybinskom Vodokhranilishche*. (Way of life, growth and feeding of the young burbot in Rybinsk Reservoir). *Trudy Instituta Biologii Vnutrennikh Vod* 17(20):230-240. Howland, R. M., translator. U.S. Bureau of Sport Fish and Wildlife Translation, 1969:15p.

This report provides a comprehensive review of burbot biology through the first year of life. Discusses reproduction, growth, feeding, and behavior. An extensive review of available literature is included.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; FEEDING; REPRODUCTION.

560. Voronin, V. N. 1978. *Pleistophora Ladogensis* Sp. Nov., *Microsporidia* (Protozoa, *Microsporidia*) from musculature of the burbot, *Lota lota* and the smelt *Osmerus eperlanus ladogensis*. *Parazitologiya* (Leningrad) 12(5):453-455.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

561. Vostradovsky, J. 1971. Management of dam lakes and natural waters. *Proceedings of Symposium: New Ways of Freshwater Fishery Intensification*. 'Vodnany, Czechoslovakia: Fish. Res. Inst.:166-169.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

562. Vuorela, R., J. Kaitaranta, and R. R. Linko. 1979. Proximate composition of fish roe in relation to maturity. *Canadian Institute of Food Science and Technology Journal* 12(4):186-188.

Original not reviewed. This paper reportedly presents data on total and gonad weights, as well as the total moisture, ash, protein, and lipid content of the roe for burbot and other species.

KEY WORDS: PHYSIOLOGY; REPRODUCTION.

563. Wagner, G. 1908. Notes on the fish fauna of Lake Pepin. *Transactions of the Wisconsin Academy of Science, Arts and Letters* 16(1):23-37.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; SPECIES DESCRIPTION.

564. Wagner, W. C. 1972. Utilization of alewives by inshore piscivorous fishes in Lake Michigan. Transactions of the American Fisheries Society 101(1):55-63.

This article documents food preferences of burbot and other predator species during open-water periods in northwestern Lake Michigan. Burbot fed primarily on fish and secondarily on insects. Predator-prey weight relationships are presented.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING.

565. Walbaum, J. J. 1792. Petri Artedi renovati. Pt. 3. A. F. Roese, Grypesvaldiae:723p.

Original not reviewed. The author describes an early classification scheme for burbot.

KEY WORDS: CLASSIFICATION.

566. Walters, V. 1955. Fishes of western Arctic America and eastern Arctic Siberia. Bulletin of the American Museum of Natural History 106(5):255-368.

This article provides taxonomic and zoogeographic notes for burbot from western Arctic America and eastern Arctic Siberia.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; MORPHOLOGY; SPECIES DESCRIPTION.

567. Ward, H. L. 1935. Acanthocephala of the burbot "Eel," *Lota vulgaris*. Journal of Parasitology 21:441.

Original not reviewed.

KEY WORDS: PARASITES AND DISEASE.

568. Warner, K. 1972. Further studies of fish predation on salmon stocked in Maine lakes. Progressive Fish Culturist 34(4):217-221.

Original not reviewed.

KEY WORDS: FEEDING.

569. Weber, J. J. 1971. Winnebago's bonus cod. Wisconsin Conservation Bulletin 36(6):23.

Original not reviewed. Harvest techniques and utilization of burbot are reportedly discussed.

KEY WORDS: HARVEST, UTILIZATION.

570. Weber, J. J. 1976. Winter observations on the age and growth of the Burbot in Lake Winnebao, Wisconsin. Madison, WI: Wisconsin Department of Natural Resources, Report No. 89:10p.

This report summarizes burbot data collected from Lake Winnebao from 1969 to 1971. Age, growth, aging techniques, maturity, and a brief literature review are included.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; FEEDING; MOVEMENTS; REPRODUCTION.

571. Wells, L., and A. L. McLain. 1972. Lake Michigan: effects of exploitation, introductions, and eutrophication on the salmonid community. Journal of the Fisheries Research Board of Canada 29(6):889-898.

Original not reviewed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; POPULATION DYNAMICS; SPECIES DESCRIPTION.

572. Wersall, J., and A. Flock. 1964. Suppression and restoration of microphonic output from lateral line organ after local application of streptomycin. Life Science 3:1151-1155.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

573. Westerman, F. I., P. I. Tack, and A. S. Hazzard. 1943. Michigan's program to encourage wider utilization of the less popular varieties of fish. Transactions of the Eighth North American Wildlife Conference:p. 251-259.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION; UTILIZATION.

574. Whalls, M. J., and D. S. Shetter. 1956. Food habits of burbot (*Lota lota lacustris*) from the east branch of the Black River, Montmorency County, Michigan. Michigan Department of Conservation, Institute for Fisheries Research, Report Number 1476:6p.

Original not reviewed. Food habits and parasites of burbot are reportedly discussed.

KEY WORDS: GEOGRAPHIC DISTRIBUTION; FEEDING; PARASITES AND DISEASE.

575. Wickstrom, R. D. 1977. Fish distribution in Kluane National Park and peripheral area. Winnipeg, MB: Canadian Wildlife Service, Ms. Report to Parks Canada:31p.

This report describes burbot presence as determined by netting within the Kluane National Park in western Canada.

KEY WORDS: CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION.

576. Wickstrom, R. D. 1978. Limnological survey of Kluane National Park southwest Yukon, Vol. III - results and discussion. Winnipeg, MB: Canadian Wildlife Service, Ms. Report to Parks Canada:166p.

This report contains essentially the same fisheries data as Wickstrom (1977) with the inclusion of interesting limnological data.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

577. Wiggs, A. J. 1968. Acclimation of the thyroid proteinase of the burbot, *Lota lota*, Linnaeus, to seasonal temperature change. Edmonton, AB: Univ. of Alberta, Ph.D. Thesis.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

578. Wiggs, A. J. 1971. Seasonal changes in the extrathyroidal distribution of iodide in the teleost fish the burbot, *Lota lota*, L. Canadian Journal of Zoology 19(12):1505-1511.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

579. Wiggs, A. J. 1973. Partial characterization of the thyroid proteinase of the burbot, *Lota lota* L. Comparative Biochemistry and Physiology. A: Comparative Physiology 45(3):869-882.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

580. Wiggs, A. J. 1974. Seasonal changes in the thyroid proteinase of a teleost fish, the burbot, *Lota lota* Linnaeus. Canadian Journal of Zoology 52(8):1071-1078.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

581. Wilimovsky, Norman J. 1958. Provisional keys to the Fishes of Alaska. Fish Res. Lab. USFWS:113p.

Original not reviewed.

KEY WORDS: CLASSIFICATION.

582. Williams, F. T. 1958. Progress report on life history investigations of the burbot. Wyoming Game and Fish Commission, Project No. 2355-2-2, Progress Report:39p.

The author reports on progress of burbot life history investigation projects in Wyoming. Burbot capture methods, winter sampling techniques, fish distribution, organ weights, food preferences, and spawning/rearing notes are included.

KEY WORDS: AGE AND GROWTH; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST; REPRODUCTION; SPECIES DESCRIPTION.

583. Williams, F. T. 1969. Inventory and cataloging of the sport fish and sport fish waters of the Copper River, Prince William Sound, and the Upper Susitna River drainages. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-1, Annual Report of Progress 10(14-A):282-284.

This report presents age and growth, sampling techniques and sport harvest of burbot captured in several Glennallen area waters.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; HARVEST.

584. Williams, F. T. 1972. Inventory and cataloging of the sport fish and sport fish waters of the Copper River, Prince William Sound, and the Upper Susitna River drainages. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-4, Annual Report of Progress 13(G-I-F):p. 97, 99-100.

This report describes age and growth data for burbot sampled in Susitna Lake near Glennallen and infers possible non-sequential spawning for some of the fish sampled. Also described is a winterkill of burbot in nearby Tolsona Lake due to low dissolved oxygen levels (0.5 ppm).

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION; PHYSIOLOGY; REPRODUCTION.

585. Williams, F. T. 1976. Inventory and cataloging of sport fish and sport fish waters of the Copper River, Prince William Sound and the upper Susitna River drainages. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-8, Annual Report of Progress 17(G-I-F):p. 125-126.

This report presents data on age and growth, sex, maturity, and sport harvest of burbot from Hudson Lake south of Glennallen.

KEY WORDS: AGE AND GROWTH; GEOGRAPHIC DISTRIBUTION; HARVEST; REPRODUCTION.

586. Williams, F. T. 1977. Inventory and cataloging of sport fish and sport fish waters of the Copper River, Prince William Sound and the upper Susitna River drainages. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-9, Annual Report of Progress 18(G-I-F):p. 17, 21-23.

This report discusses sport harvest, age and growth, and winter ice/oxygen conditions in Tolsona Lake near Glennallen.

KEY WORDS: AGE AND GROWTH; HARVEST.

587. Williams, F. T., and W. D. Potterville. 1983. Inventory and cataloging of sport fish waters of the Copper River, Prince William Sound, and the upper Susitna River drainages. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-15, Annual Report of Progress 24(G-I-F):p. 30-36.

This report discusses fish population sampling in 11 lakes adjacent to Lake Louise near Glennallen. In several lakes burbot were captured. Also includes area population sampling and overwintering observations for Moose and Tolsona Lakes.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; FEEDING; GEOGRAPHIC DISTRIBUTION; REPRODUCTION.

588. Williams, F. T., and W. D. Potterville. 1985. Glennallen/Prince William Sound angler use and stock assessment studies. Juneau, AK: Alaska Department of Fish and Game, Federal Aid in Fish Restoration Project F-9-17, Annual Performance Report 26(G-I-F):p. 97-101.

This report reviews burbot fisheries in the Glennallen area and describes some population factors for burbot in nearby Moose, Tolsona, and Hudson Lakes.

KEY WORDS: AGE AND GROWTH; CAPTURE METHODS; GEOGRAPHIC DISTRIBUTION; HARVEST; MANAGEMENT.

589. Wilson, John F. 1941. Burbot liver oil in the treatment of various dermatoses. Minnesota Medicine 24:p. 456.

Original not reviewed.

KEY WORDS: UTILIZATION.

590. Wisconsin Department of Natural Resources. 1976. Wisconsin's Great Lakes commercial fisheries for 1974. Wisconsin Department of Natural Resources Bureau of Fish Management Section Report 86:17p.

Original not reviewed. Commercial catches of burbot are reportedly discussed.

KEY WORDS: HARVEST.

591. Wobeser, G., N. O. Nielsen, R. H. Sunlop, and T. M. Atton. 1970. Mercury concentrations in tissues of fish from the Saskatchewan River. Journal of the Fisheries Research Board of Canada 27(4):1246-1269.

Original not reviewed.

KEY WORDS: PHYSIOLOGY.

592. Wood, W. 1869. The compressed burbot of eel pout (*Lota compressa*).
American Naturalist 3 (1870):17-21.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

593. Wunder, W. 1936. Stuttgart: Physiologie der Susswasserfische
Mitteleuropas.

Original not reviewed. The author reportedly discusses oxygen
requirements of burbot.

KEY WORDS: PHYSIOLOGY.

594. Wynne-Edwards, V. C. 1952. Freshwater vertebrates of the Arctic
and Subarctic. Fisheries Research Board of Canada Bulletin
No. 94:28p.

Original not reviewed.

KEY WORDS: CLASSIFICATION; SPECIES DESCRIPTION.

595. Yanagawa, C. 1967. Tikchik Lake system commercial freshwater
fishery. Juneau, AK: Alaska Department of Fish and Game,
Informational Leaflet 109:19p.

This report describes burbot presence in the Tikchik Lake system in
southwestern Alaska.

KEY WORDS: GEOGRAPHIC DISTRIBUTION.

596. Yevropeytseva, N. V. 1946. The larval period of the burbot (In
Russian). Trudy Leningradskogo Obshchestva
Estestvoispytatelei 19(4):31-52.

Original not reviewed. This article reportedly discusses reproduction and
early life history of burbot.

KEY WORDS: REPRODUCTION.

597. Zakharchenko, G. M. 1973. The feeding of the burbot (*Lota lota*
(L.)) in the upper reaches of the Pechora. Journal of
Ichthyology 13(2):310-312.

Studies are presented that describe the predation on juvenile salmon by
burbot in Russia during 1968-70. The effect on Atlantic salmon juveniles

was minimal. The author concludes that burbot selectively eat items most available as food.

KEY WORDS: FEEDING.

598. Zelt, K. A. 1975. The feasibility of using trap nets to selectively harvest ling, *Lota lota*, in Lesser Slave Lake, Alberta. Edmonton, AB: Department of Recreation, Parks and Wildlife, Fisheries Management Report No. 20.

Trap nets were used to harvest burbot. Catches varied with site and time of the year. Catches increased during the spring as burbot moved inshore for spawning. Catch rates were considered to be inadequate to support a commercial fishery. Included are age and growth data as well as an interesting account of setting fyke traps under the ice.

KEY WORDS: AGE AND GROWTH; BEHAVIOR; CAPTURE METHODS; HARVEST; MOVEMENTS; REPRODUCTION.

599. Zuurdeeg, C. A. E. 1974. De Kwaball (*Lota lota* L.). *Levende Natuur* 77(10):229-232.

Original not reviewed.

KEY WORDS: SPECIES DESCRIPTION.

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LITERATURE CITED

Bartholomew, M. A. 1963, Bibliography of the references to the Burbot (*Lota lota*). Student paper available from: University of Alaska Cooperative Fisheries Research Unit, Fairbanks, AK.:12p.

BIOSIS list of serials: with CODEN, title abbreviations, new, changed and ceased titles. 1987. Philadelphia, PA: BioSciences Information Service:332p.

Walker, R. J. 1980. Burbot bibliography. Student paper available from: University of Alaska Cooperative Fisheries Research Unit, Fairbanks, AK.:23p.

Webster's Ninth New Collegiate Dictionary. 1984. Springfield, MA: Merriam-Webster, Inc., Publishers:1563p.

COMPUTER DATA BASES CITED

AQUATIC SCIENCES AND FISHERIES ABSTRACTS 1978-1987. Mar. 1987. Available from: DIALOG Information Services, Inc.:21p.

Arctic Science and Technology. Citations and abstracts concerning all aspects of the North. Dec. 1985. Key words: burbot, *Lota*. Available from: Arctic Institute of North America, University of Calgary, Calgary, AB.:1p.

BIOSIS PREVIEWS 1969-1987. Mar. 1987. Key words: burbot, *Lota lota*. Available from: informatics General Corporation, Rockville, MD.:18p.

Boreal Northern Titles. An exhaustive survey of publications concerning the North. Dec. 1985. Key words: burbot, *Lota*. Available from: The Boreal Institute, University of Alberta, Edmonton, AB.:1p.

DISSERTATION ABSTRACTS ONLINE 1861-1987. Mar. 1987. Key words: burbot, *Lota lota*. Available from: DIALOG Information Services, Inc.:2p.

Fish and Wildlife Reference Service. File 957: Fish and Wildlife Private File and File 920: Current Federal Aid Research. Dec. 1985. Key words: burbot, *Lota lota*. Available from: Informatics General Corporation, Rockville, MD.:18p.

Freshwater Institute database. Feb. 1986. Key words: burbot, *Lota*, burbot or *Lota*. Available from: Environment Canada, Fisheries and Marine Service, Freshwater Institute, Winnipeg, MB.:12p.

OCEANIC ABSTRACTS 1964-1987. Mar. 1987. Key words: Burbot, *Lota lota*. Available from: DIALOG Information Services, Inc.:3p.

Sport Fishery Abstracts database. Dec. 1985. Key words: burbot, *Lota lota*. Available from: USFWS, Office of Information Transfer, Ft. Collins. CO.:3p.

