
OBITUARY

In Memory of Nina Vasil'evna Akimova

February 20, 1941–February 18, 2007

DOI: 10.1134/S0032945207080176



On February 18, 2007, Nina Vasil'evna Akimova, one of the veterans of the Severtsov Institute of Ecology and Evolution, passed away.

Nina Vasil'evna Akimova (Kostikova) was born on February 20, 1941, into a family of office workers. After graduating from middle school in 1958, she began her working career as a laboratory assistant at the Russian Federal Research Institute of Fishery and Oceanography (VNIRO). In 1960, she entered the Biological and Soil Science Faculty at Moscow State Uni-

versity from which she graduated in 1965 (the department of ichthyology headed at that time by the corresponding member of the Academy of Sciences of the USSR Georgii Vasil'evich Nikolsky).

From 1965 to 1967, Akimova worked as research probationer in the Laboratory of Vertebrate Embryology at Severtsov Institute of Animal Morphology, Academy of Sciences of the USSR. In this period, she mastered scuba diving and in 1967, under the supervision of D.V. Radakov, participated in studying fish

behavior during trawling, which required great courage and self-control from the researcher.

From 1971 to 1974, Akimova improved her professional skill as a postgraduate student at the Institute of Animal Morphology, Academy of Sciences of the USSR, under the guidance of Boris Viktorovich Koshelev and in 1985 defended her candidate's dissertation "Gametogenesis and Reproduction of Siberian Sturgeon" (in ichthyology, embryology, and histology). During these studies, she collected materials in expeditions in the Lena and Aldan rivers under the severe conditions of Yakutia. Akimova learned the methods of histological studies of gametogenesis of acipenserids to treat the material. Her studies on the development and functioning of the reproductive system of Siberian sturgeon in nature and while its cultivation in warm water served as the basis for elaborating the biotechnics of creating brood stocks of this species, on which the aquaculture of acipenserids is currently mainly based all over the world.

The scientific interests of Akimova included specific features of oogenesis, not only in sturgeon, but also of the nine-spined stickleback, ruffe, and several species of coregonids. She devoted much attention to the anthropogenic influence on the reproduction of fish, especially of sturgeon. The results of these studies were widely acknowledged in Russia and abroad. Akimova had published more than 130 papers.

Akimova was a very active, benevolent person who was always ready to delicately render aid and moral support to all that needed them. At the same time, she was an extraordinarily firm person. Even in the difficult period of disease, she continued to retain working capacity, self-control, and optimism.

We have lost a remarkable worker and a clever and kind friend, and her children, grandchildren, and great grandchildren lost a loving, delicate instructor who was always preoccupied with their fates.

V. S. Malyutin,
K. I. Moskal'kova,
M. P. Nikolskaya,
S. S. Rodionova,
G. I. Ruban,
G. V. Filatkina,
O. V. Khalatyan,
Zh. A. Chernyaev,
V. G. Shagaeva,
M. I. Shatunovskii

THE LIST OF MAIN SCIENTIFIC WORKS OF N.V. AKIMOVA

Akimova, N.V., "On the Methods of Age Determination in Siberian Sturgeon from the Lena River," *Vopr. Ikhtiol.*, 1976, vol. 16, no. 5, pp. 853–858 (in coauthorship with Sokolov, L.I.).

Akimova, N.V., "Gametogenesis and Functioning of Gonads in Siberian Sturgeon *Acipenser baeri* Brandt from the Lena River and Their Relation to Metabolism," in *Ekologo-morfolicheskie i ekologo-fiziologicheskie issledovaniya razvitiya ryb* (Ecologo-Morphological and Ecologo-Physiological Studies of Fish Development), Moscow: Nauka, 1978, pp. 43–55.

Akimova, N.V., "Comparative Analysis of Growth and Gametogenesis of Siberian Sturgeon from the Lena River under Natural and Experimental Conditions," in *Vnutrivotivaya izmenchivost' v ontogeneze zhivotnykh* (Intraspecies Variation in Animal Ontogeny), Moscow: Nauka, 1980, pp. 167–176 (in coauthorship with Sokolov, L.I., Smol'yanov, I.I., and Malyutin, V.S.).

Akimova, N.V., "Maturation and Sexual Cycles in Acipenserids (with Reference to Siberian Sturgeon from the Lena River)," in *Razmnozhenie i razvitiye ryb (metodicheskoe posobie)* (Reproduction and Development of Fish (Methodical Guide)), Moscow: Nauka, 1981, pp. 48–57.

Akimova, N.V., "Results of Fish-Cultural Acclimatization Works with Siberian Sturgeon," in *Biologicheskie osnovy osetrovodstva* (Biological Foundations of Sturgeon Husbandry), Moscow: Nauka, 1983, pp. 259–269 (in coauthorship with Berdichevskii, L.S., Malyutin, V.S., Smol'yanov, I. I., Sokolov, L.I., and Kokarev, V.A.).

Akimova, N.V., "Gametogenesis and Sex Cyclicity of Siberian Sturgeon under Natural and Experimental Conditions," in *Osobennosti reproduktivnykh tsiklov u ryb v vodoemakh raznykh shirok* (Specific Features of Reproductive Cycles in Fish in Water Bodies of Different Latitudes), Moscow: Nauka, 1985, pp. 111–122.

Akimova, N.V., "Ecologo-Morphologic Characteristic of Siberian Sturgeon *Acipenser baeri* Brandt from the Aldan River," *Vopr. Ikhtiol.*, 1986, vol. 26, no. 5, pp. 741–749. (in coauthorship with Sokolov, L.I., Koshelev, B.V., Khalatyan, O.V., Ruban, G.I., and Sokolova, E.L.).

Akimova, N.V., "Histoecological Study of Gametogenesis and Sex Cyclicity in Fish with Reference to Nine-Spined Stickleback," in *Metody bioindikatsii okruzhayushchey sredy v raionakh AES* (Methods of Environment Bioindication in the Areas of the Nuclear Power Plant), Moscow: Nauka, 1988, pp. 61–71.

Akimova, N.V., "Ecologo-Morphological Characteristic of Siberian Sturgeon *Acipenser baeri* Brandt from the Basin of the Middle and Upper Lena," in *Morfologiya, ekologiya i povedenie osetrovых* (Morphology, Ecology, and Behavior of Acipenserids), Moscow: Nauka, 1989, pp. 16–33 (in coauthorship with Koshelev, B.V., Ruban, G.I., Sokolov, L.I., Khalatyan, O.V., and Sokolova, E.L.).

Akimova, N.V., "Specific Features of Ecology of Siberian Sturgeon *Acipenser baeri* from the Indigirka River," *Vopr. Ikhtiol.*, 1991, vol. 31, no. 4, pp. 596–605 (in coauthorship with Ruban, G.I.).

Akimova, N.V., "Analysis of the State of the Reproductive System in Fish in Relation to Problems of Bioindication with Reference to Siberian Sturgeon *Acipenser baeri*," *Vopr. Ikhtiol.*, 1992, vol. 32, no. 6, pp. 102–109 (in coauthorship with Ruban, G.I.).

Akimova, N.V., "Specific Features of Ecology of Siberian Sturgeon *Acipenser baeri* from the Kolyma River," *Vopr. Ikhtiol.*, 1993, vol. 33, no. 1, pp. 84–92 (in coauthorship with Ruban, G.I.).

- Akimova, N.V., "Study of Early Ontogenesis in Volga Acipenserids in Relation to the Anthropogenic Impact," *Vopr. Ikhtiol.*, 1993, vol. 33, no. 2, pp. 230–240 (in coauthorship with Shagaeva, V.G., Nikolskaya, M.P., Markov, K.P., and Nikolskaya, N.G.).
- Akimova, N.V., "Response of the Reproductive System of Acipenserids to Anthropogenic Impacts as a Factor of Populations Dynamics," in *Proceedings of All-Russia Conference on the Ecology of Populations: Structure and Dynamics, 1994, Pushchino, Part 2*, Moscow: Russ. Akad. Sci., 1995, pp. 491–500 (in coauthorship with Ruban, G.I.).
- Akimova, N.V., "Analysis of the State of the Reproductive System of Siberian Sturgeon from Central Siberia," in *Proceedings of All-Russia Conference on Ecosystems of the North: Structure, Adaptation, and Stability, 1993, Petrozavodsk*, Moscow: Mosk. Gos. Univ., 1995, pp. 93–98 (in coauthorship with Ruban, G.I. and Mikhalev, Yu.V.).
- Akimova, N.V., "Disturbances in the Development and Functioning of the Reproductive System of Acipenserids from the Yenisei River," *Vopr. Ikhtiol.*, 1995, vol. 35, no. 2, pp. 236–246 (in coauthorship with Panaiotidi, A.I. and Ruban, G.I.).
- Akimova, N.V., "Disturbances of Siberian Sturgeon's Generative System Resulted from Anthropogenic Influence," in *Proceedings of International Symposium on Sturgeons, 1993, Moscow-Kostroma, Russia*, Moscow: VNIRO, 1995, pp. 74–79 (in coauthorship with Ruban, G.I.).
- Akimova, N.V., "Pathology of the Early Ontogenesis of the Volga River Basin Acipenseridae," in *Proceedings of International Symposium on Sturgeons, 1993, Moscow-Kostroma, Russia*, Moscow: VNIRO, 1995, pp. 62–73 (in coauthorship with Shagaeva, V.G., Nikolskaya, M.P., and Markov, K.P.).
- Akimova, N.V., "Systematization of Disturbances in Reproduction of Acipenseridae under the Anthropogenic Impact," *Vopr. Ikhtiol.*, 1996, vol. 36, no. 1, pp. 65–80 (in coauthorship with Ruban, G.I.).
- Akimova, N.V., "The Response of the Reproductive System of Fish to Anthropogenic Impacts," *Vopr. Ikhtiol.*, 1996, vol. 36, no. 2, pp. 229–239 (in coauthorship with Shatunovskii, M.I. and Ruban, G.I.).
- Akimova, N.V., "Morphological State of the Reproductive System of Fish in Water Bodies of Kola Peninsula," *Vopr. Ikhtiol.*, 2000, vol. 40, no. 2, pp. 282–285 (in coauthorship with Popova, O.A., Reshetnikov, Yu.S., Kashulin, N.A., Lukin, A.A., and Amundsen, P.A.).
- Akimova, N.V., "Factors of Population Decrease and the State of the Reproductive System of Siberian Sturgeon *Acipenser baerii* Brandt from the Ob River," in *Fish Husbandry. Ser. Reproduction and Pasture Cultivation of Hydrobiota*, Issue 3, Moscow: VNIEKH, 2000, pp. 49–57 (in coauthorship with Ruban, G.I.).
- Akimova, N.V., "Anomalies in the Reproductive System of Fish from Kola Peninsula under an Anthropogenic Impact," *Izv. Samarsk. Nauchn. Tsentr Ross. Akad. Nauk*, 2000, vol. 2, no. 2, pp. 274–282 (in coauthorship with Reshetnikov, Yu.S. and Popova, O.A.).
- Akimova, N.V., "The State of Reproductive System and the Causes of Population Decrease of Siberian sturgeon *Acipenser baerii* from the Ob River," *Vopr. Ikhtiol.*, 2001, vol. 41, no. 2, pp. 278–282 (in coauthorship with Ruban, G.I.).
- Akimova, N.V., "Reproductive Capacities in the Polyploid Males of Spined Loaches from the Unisexual-Bisexual Complex, Occurred in the Moscow River," *Folia Biol. (Krakow)*, 2003, vol. 51, Suppl., pp. 67–73 (in coauthorship with Vasil'ev, V.P., Emelyanova, N., Vasil'eva, E.D., and Pavlov, D.).
- Akimova, N.V., "The Reproductive System of Amu Darya Shovelnoises—*Pseudoscaphirhynchus kaufmanni* and *P. hermanni* (Acipenseridae)," *Vopr. Ikhtiol.*, 2003, vol. 43, no. 4, pp. 499–510 (in coauthorship with Sal'nikov, V.B., Ruban, G.I., Meiden, R.L., and Kukhaida, B.R.).
- Akimova, N.V., *Atlas narushenii v gametogeneze i stroenii molodi osetrovых* (Atlas of Abnormalities in Gametogenesis and Structure of Juvenile Sturgeons), Moscow: VNIRO, 2004 (in coauthorship with Goryunova, V.B., Mikodina, E.V., Nikolskaya, M.P., Ruban, G.I., Sokolova, S.A., Shagaeva, V.G., and Shatunovskii, M.I.).
- Akimova, N.V., "Morphological Study of Mature Ovicells in Acipenseridae from the Lower Reaches of the Volga," *Vopr. Ikhtiol.*, 2005, vol. 45, no. 5, pp. 665–679 (in coauthorship with Shagaeva, V.G., Ruban, G.I., and Goryunova, V.B.).
- Akimova, N.V., "On Pathologies in the Structure of Mature Ovicells of Acipenseridae from the Lower Reaches of the Volga," in *Proceedings of International Scientific and Practical Conference on Problems of Preservation of the Caspian Ecosystem under Conditions of Development of Oil and Gas Deposits*, Astrakhan, 2005, pp. 170–175 (in coauthorship with Ruban, G.I., Shagaeva, V.G., and Goryunova, V.B.).
- Akimova, N.V., "On Population and Ontogenetic Mechanisms of Regulation of Fish Reproduction," *Usp. Sovrem. Biol.*, 2007, vol. 127, no. 1, pp. 87–96 (in coauthorship with Shatunovskii, M.I. and Ruban, G.I.).

Translated by I.A. Pogosyants