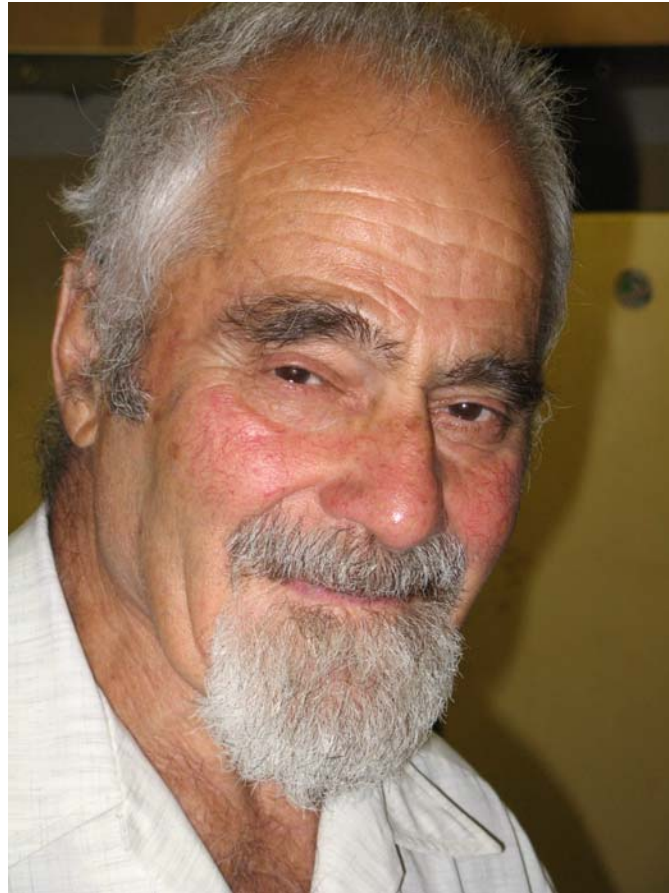


Obituary



Petr Petrovich Gambaryan (1925–2017)

Petr Petrovich Gambaryan, age 92, passed away on August 31, 2017, in Saint Petersburg, Russia. He was a remarkable person, a distinguished scholar, a leading scientific worker at the Zoological Institute of Russian Academy of Sciences, a Doctor of Biological Sciences, and a Professor of Zoology.

From an early age Petr Petrovich was a remarkably gifted individual with a strong passion for zoology. His diligence helped him overcome numerous life challenges. Petr Petrovich Gambaryan was born in Paris, France, on April 18, 1925, while his father Petr Pavlovich studied at the Paris-Sorbonne University. In 1929 the Gambaryan family returned to Armenia. Petr Petrovich's father, Petr Pavlovich, became an Assistant Professor at the Geological Institute of Academy of Sciences of Armenian SSR. Petr Pavlovich tragically died in an airplane crash near Tbilisi, Georgia in 1933. Petr Petrovich's mother, Natalia Petrovna, was left alone to care for six children, and she made a living giving French lessons. Having lost his father early in life, Petr Gambaryan became a great source of support for his big family, while continuing to be highly successful in his

studies. His incredible scholarly talent and an unwavering thirst for knowledge allowed him to seek an accelerated course of study, and he was accepted directly as a second year student at the Yerevan Zooveterinarian Institute. Continuing to combine studies with work in the prospecting geological expeditions, Petr Gambaryan soon transferred to the Biology Department of the Yerevan State University. In 1949, three short years after graduation, Gambaryan defended his PhD thesis "Adaptive features of forelimbs in Nehring's blind mole-rat (*Spalax leucodon nehringi* Satunin, 1898)" at the Zoological Institute of Russian Academy of Sciences.

In 1961 Petr Gambaryan became a member of the Laboratory of Theriology at the Zoological Institute of RAS. In 1984 P.P. Gambaryan became irreplaceable as head of Functional Morphology Department and from 1986 served as its leading research scientist. Thus, Petr Petrovich had worked at the Zoological Institute of RAS for almost 50 years, while his entire length of employment added up to over 70 years total.

Petr Petrovich was an indispensable source of new ideas and a tireless field researcher. He participated in

numerous research expeditions to the Caucasus Mountains, Middle Asia, Cuba and Vietnam, helping refill the Zoological Institute collections with new valuable materials, including complete large mammal skeletons and carcasses.

P.P. Gambaryan is the author of over 100 publications, including 10 monographs, both in Russia and abroad. His comparative morpho-functional analysis covers a wide range of mammalian forms and addresses a plethora of adaptive evolution problems. Gambaryan's works on transformations of musculoskeletal system due to specialization in fossorial activity, jumping, running and swimming, deserve a special mention.

One of Gambaryan's main treatises is his fundamental monograph "How Mammals Run" (1974). This publication is a result of a multi-year research project conducted both in natural and experimental conditions. In the summary of the book, one can find classification of various modes and forms of running in mammals (more than 200 species from 6 orders). The monograph was later published in English (Gambaryan, 1974).

In the 1990s Petr Petrovich's area of scientific research interests expanded beyond the realm of functional morphology. He collaborated with researchers from Russia and Dr. Zofia Kielan-Jaworowska from Poland to reconstruct musculoskeletal systems of extinct mammalian species. As a result, several exciting articles were published. For example, "Postcranial anatomy and habits of Asian multituberculate mammals" (Kielan-Jaworowska & Gambaryan, 1994), "Masticatory musculature in Asian taeniolabidoid multituberculate mammals" (Kielan-Jaworowska & Gambaryan, 1995) and "Sprawling versus parasagittal stance in multituberculate mammals" (Kielan-Jaworowska & Gambaryan, 1997).

At the end of 1990s, Petr Petrovich Gambaryan together with Dr. Jean-Pierre Gasc from National Museum of Natural History (France) explored the biomechanics of some fossorial mammals (*Myospalax myospalax* and *Talpa europaea*) using cinefluorographical analysis and special observation methods. The findings are published in the following articles: "Adaptive properties of the musculoskeletal system in the mole-rat *Myospalax myospalax* (Mammalia, Rodentia), cinefluorographical, anatomical, and biomechanical analyses of burrowing" (Gambaryan & Gasc, 1993); "Cinefluorographical study of the burrowing movements in the common mole, *Talpa europaea* (Lipotyphla, Talpidae)" (Gambaryan *et al.*, 2002).

In 2000s, Petr Petrovich Gambaryan collaborated with his Australian colleagues in a study of locomotor apparatus of monotremes. This research effort resulted in the following publications: "Peculiarities of the hind limb musculature in monotremes: an anatomical description and functional approach" (Gambaryan *et al.*, 2002); "An evolutionary perspective on the walking gait of the long-beaked echidna" (Gambaryan & Kuznetsov, 2013); "Shoulder girdle and forelimb myology of extant Monotremata" (Gambaryan *et al.*, 2015).

In recent years, Petr Petrovich Gambaryan participated in several research grants supported by the Russian Foundation for Basic Research, focused on observation of morphological features of relict species from Laos — *Laonastes aenigmamus* (Diatomyidae) (Gambaryan *et al.*, 2013, 2014).

Petr Petrovich Gambaryan's fruitful scientific research was appreciated and rewarded by the scientific community. In 1973 he received the award from the Moscow Society of Naturalists for his research related to mammalian modes of locomotion. In 1981 he became a laureate of Academician A.N. Severtsov Award at the USSR Academy of Sciences for a series of writings about the evolution of mammal locomotion.

Petr Petrovich Gambaryan stood out for his wisdom, sincerity and kindness toward others. His extraordinary enthusiasm, indomitable energy, and exceptional temperament attracted the attention of many young researchers. Many of his former PhD and graduate students and trainees, jokingly dubbed "gambaryanoids", recall the time spent working under his guidance with special warmth and respect.

Earlier this year, following heart surgery, Petr Petrovich Gambaryan fought against time to finish his new book on the fossorial adaptations in mammals. He was working on this monograph down to the last day.

Petr Petrovich Gambaryan will forever remain in our grateful memory and will continue to live on in the new accomplishments of his followers.

O.V. Zherebtsova, G.E. Zubtsova & A.A. Perepelova

Scientific publications of Prof. Petr P. Gambaryan

- Gambaryan P.P. 1946. [Musculature of the pectoral arch in some rodents] // *Izvestiya Akademii Nauk Armyanskoi SSR. Estestvennye Nauki*. T.7. P.69–81 [in Russian].
- Gambaryan P.P. 1948. [Musculature of the forelimb proximal region in some rodents] // *Izvestiya Akademii Nauk Armyanskoi SSR. Estestvennye Nauki*. T.1. No.3. P.211–229 [in Russian].
- Gambaryan P.P. 1949. [Adaptive features of forelimbs in Nehring's blind mole-rat (*Spalax leucodon nehringi* Satunin, 1898)]. Avtoreferat dissertatsii kandidata biologicheskikh nauk [Abstract of PhD Dissertation in Zoology]. Yerevan/ 9 p. [in Russian].
- Gambaryan P.P. 1949. [Similar development of some morphological characters in mole rat and zokor in the result of their adaptation to digging activity] // *Izvestiya Akademii Nauk Armyanskoi SSR. Biologicheskie i Sel'skokozyaistvennye Nauki*. T.2. No.4. P.385–392 [in Russian].
- Gambaryan P.P. 1951. [To question of systematic state of the mountain mole-vole *Ellobius lutescens* Thos.] // *Doklady Akademii Nauk Armyanskoi SSR*. T.14. No.2. P.45–48 [in Russian].
- Gambaryan P.P. 1951. [About abnormal structure of the musculus biceps brachii in squirrel *Sciurus persicus anom-*

- alus* Gmel.] // Doklady Akademii Nauk Armyanskoi SSR. T.13. No.2. P.55–58 [in Russian].
- Gambaryan P.P. 1951. [Peculiarities of the ecology in the mountain mole-vole *Ellobius lutescens* Thos.] // Izvestiya Akademii Nauk Armyanskoi SSR. Biologicheskie i sel'skokhozyaistvennyye nauki. T.4. No.9. P.809–820 [in Russian].
- Gambaryan P.P. 1951. [Role of spinous process of the second thoracic vertebra in some rodents] // Zoologicheskii Zhurnal. T.30. No.2. P.65–171 [in Russian].
- Vinogradov B.S. & Gambaryan P.P. 1952. [Oligocene cylirodonts of Mongolia and Kazakhstan (Cylindrodontidae, Glires, Mammalia)] // Trudy Paleontologicheskogo Instituta AN SSSR. T.41. No.1. P.3–42 [in Russian].
- Gambaryan P.P. 1952. [Features of the burrows structure in the *Prometheomys* voles] // Doklady Akademii Nauk Armyanskoi SSR. T.15. No.3. P.85–88 [in Russian].
- Gambaryan P.P. 1953. [Adaptive peculiarities of the forelimb in mole rat (*Spalax leucodon nehringi* Satunin)] // Zoologicheskii Sbornik AN Armyanskoi SSR. T.8. P.67–125 [in Russian].
- Gambaryan P.P. 1953. [Materials on the ecology and economic importance of the mole-vole] // Izvestiya Akademii Nauk Armyanskoi SSR. Biologicheskie i Sel'skokhozyaistvennyye Nauki. T.6. No.6. P.81–86 [in Russian].
- Gambaryan P.P. 1954. [Origin and role of the lateral rhomboid muscle in mammals] // Doklady Akademii Nauk Armyanskoi SSR. T.18. No.2. P.59–64 [in Russian].
- Gambaryan P.P. 1955. [Biomechanics of ricochet jump in rodents] // Zoologicheskii Zhurnal. T.34. No.3. P.621–630 [in Russian].
- Gambaryan P.P. 1955. [The state of work on the registration and prognosis of the number of rodents in Armenia] // Trudy problemnykh i tematicheskikh soveshchaniy ZIN AN SSSR (4th soveshchanie po izucheniyu vrednykh i promyslovykh gryzunov). T.5. P.25–28 [in Russian].
- Gambaryan P.P. & Dukel'skaya N.M. 1955. [The Rat]. Moskva: Sovetskaya Nauka. 255 p. [in Russian]
- Gambaryan P.P. 1957a. [To the question of the function of pinnate muscles] // Doklady Akademii Nauk Armyanskoi SSR. T.25. No.2. P.87–91 [in Russian].
- Gambaryan P.P. 1957b. [To the issue of conservation of fauna in Armenia] // Okhrana Prirody i Zapovednoye Delo v SSSR. T.2. P.45–50 [in Russian].
- Gambaryan P.P., Karapetyan V.S., Airumyan K.A., Kazaryan K.G. & Mezhlumyan S.K. 1957. [To the ecology of the Prometheus vole *Prometheomys schaposchnikovi* Sat.] // Zoologicheskii Sbornik AN Armyanskoi SSR. Materialy po izucheniyu fauny Armyanskoi SSR. T.10. P.5–16 [in Russian].
- Gambaryan P.P. 1959. [Results of acclimatization of the sika deer in Khosrov forest] // Izvestiya Akademii Nauk Armyanskoi SSR. Biologicheskie i Sel'skokhozyaistvennyye Nauki. T.12. No.5. P.85–92 [in Russian].
- Gambaryan P.P. 1960. [Adaptive features of the organs of motion of burrowing mammals]. Yerevan: Izdatel'stvo AN Armyanskoi SSR. 196 p. [in Russian]
- Gambaryan P.P. & Martirosyan B.A. 1960. [On the ecology of the mouse-like hamster (*Calomyscus bailwardi* Thomas)] // Zoologicheskii Zhurnal. T.39. No.9. P.1408–1413 [in Russian].
- Gambaryan P.P., Papanyan S.B. & Martirosyan B.A. 1960. [Materials on the ecology of the gerbil *Meriones meridianus dahli* Schidl. in Armyanskaya SSR] // Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody. Otdel Biologicheskii. T.65. No.6. P.17–22 [in Russian].
- Gambaryan P.P. & Grigoryan V.K. 1961. [To the issue of the possibility of an air accounting of game animals in Armenia] // Izvestiya Akademii Nauk Armyanskoi SSR. Biologicheskie i Sel'skokhozyaistvennyye Nauki. T.14. No.4. P.87–91 [in Russian].
- Gambaryan P.P. & Karapetjan W.S. 1961. Besonderheiten im Bau des Seelöwen (*Eumetopias californianus*) der Baikalrobbe (*Phoca sibirica*) und des See-otters (*Enhydra lutris*) in Anpassung an die Fortbewegung im Wasser // Zoologische Jahrbücher. Abteilung für Anatomie und Ontogenie der Tiere. Bd.79. No.1. S.123–148.
- Gambaryan P.P. 1964. [Morpho-functional analysis of limbs muscles in tapir (*Tapirus americanus*)] // Zoologicheskii Sbornik AN Armyanskoi SSR. Materialy po izucheniyu fauny Armyanskoi SSR. T.13. P.5–50 [in Russian].
- Gambaryan P.P. & Papanyan S.B. 1964. [To the systematics of the gerbil *Meriones meridianus dahli* Schidl.] // Izvestiya Akademii nauk Armyanskoi SSR. Biologicheskie i sel'skokhozyaistvennyye nauki. T.17. No.7. P.91–96 [in Russian].
- Gambaryan P.P. 1967. [Different gaits of mammals as possible models of movement of lever machines] // Gaazera-poport M.G. (ed.). [Bionics Questions]. Moskva: Nauka. P.578–582 [in Russian].
- Gambaryan P.P. 1967. [Methods of field research of mammalian gaits] // Zoologicheskii Zhurnal. T.46. No.8. P.1224–1228 [in Russian].
- Gambaryan P.P. 1967. [The origin of the variety of gaits in mammals] // Zhurnal Obshchei Biologii. T.28. No.3. P.289–305 [in Russian].
- Gambaryan P.P. 1968. [Running of mammals. Adaptive features of the organs of motion] Avtoreferat dissertatsii doktora biologicheskikh nauk [Abstracts of Dissertation of Doctor of Sciences]. Leningrad: Zoologicheskii Institut AN SSSR. 45 p. [in Russian]
- Gambaryan P.P. 1969. [Review of the book by V.B. Sukhanov (1968) "General system of symmetrical locomotion of terrestrial vertebrates and features of movement of lower tetrapods"] // Zoologicheskii Zhurnal. T.48. No.9. P.1428–1429 [in Russian].
- Gambaryan P.P. & Oganesyan R.O. 1970. [Biomechanics of gallop and primitive ricochet jump in small mammals] // Izvestiya Akademii Nauk SSSR. Seriya Biologicheskaya. T.3. P.441–447 [in Russian].
- Gambaryan P.P. 1971. [Methods of functional analysis of the work of mammalian muscles] // [Abstracts of Papers. Reporting scientific session of the Zoological Institute on the results of the work of 1970 (March 15–17, 1971)]. Leningrad: Nauka. P.9–10 [in Russian].
- Gambaryan P.P., Orlovskii G.N., Protopopova T.G., Severin F.V. & Shik M.L. 1971. [The work of muscles in different types of cat locomotion and adaptive changes in the organs of motion in the family Felidae] // Trudy Zoolo-

- gicheskogo Instituta AN SSSR. T.48. P.220–239 [in Russian].
- Gambaryan P.P. & Rukhkyan R.G. 1971. [The origin of the bipedal ricochet in small mammals] // Zoologicheskii Zhurnal. T.50. No.5. P.751–755 [in Russian].
- Gambaryan P.P. 1972. [Running of Mammals. Adaptive Features of the Organs of Motion] Leningrad: Nauka. 334 p. [In Russian]
- Gambaryan P.P. & Oganesyanyan R.O. 1972. [The digital identification keys of rodents of the Armenian SSR] // Biologicheskii Zhurnal Armenii. T.25. No.2. P.18–25 [in Russian].
- Gambaryan P.P. & Arakelova E.S. 1973. [Features of the structure of the foot flexors in the dormices (Rodentia, Glirinae)] // Zoologicheskii Zhurnal. T.52. No.1. P.104–110 [in Russian].
- Gambaryan P.P. & Rukhkyan R.G. 1974. [Morpho-functional analysis of the limb muscles of elephants] // Trudy Zoologicheskogo Instituta AN SSSR. T.54. P.190–265 [in Russian].
- Gambaryan P.P. 1974. How Mammals Run. Anatomical Adaptations. New York: J. Wiley and Sons. 367 p.
- Gambaryan P.P. 1975. [Facial musculature of some rodents] // [Abstracts of Papers. Reporting scientific conference of the Zoological Institute on the results of the work of 1974 (March 10–12, 1975)]. Leningrad: Nauka. P.9 [in Russian].
- Gambaryan P.P. & Rukhkyan R.G. 1975. [Morpho-functional analysis of the movement apparatus of squirrels (Sciuridae). Communication 1. Biomechanics and the work of the muscles of the hind limbs in the phase of support of common squirrel (*Sciurus vulgaris*)] // Zoologicheskii Sbornik AN Armyanskoi SSR. Fauna pozvonochnykh zhivotnykh Armyanskoi SSR. T.16. P.121–161 [in Russian].
- Gambaryan P.P. & Fokin I.M. 1976. [Convergent development of some muscles of the facial region of the jerboas (Rodentia, Mammalia)] // Doklady Akademii Nauk SSSR. T.231. No.3. P.733–735 [in Russian].
- Gambaryan P.P., Zubtsova G.E. & Krasts I.V. 1976. [Types of work of the masticatory apparatus of rodents during digging with incisors] // Balashov Yu.S. (ed.). [Problems of Zoology] Leningrad: Nauka. P.26–27 [in Russian].
- Gambaryan P.P. 1978. [Possibilities of the analysis of muscles for the development of supergeneric phylogenetic system of rodents] // [Abstracts of Papers. The Second Congress of the All-Union Theriological Society (January 31–February 4, 1978)]. Moskva: Nauka. P.46–47 [in Russian].
- Gambaryan P.P. 1978. [The position of zokors (genus *Myospalax*) in the rodent system] // Borkin L.Ya. (ed.). [Morphology, Systematics and Evolution of Animals]. Leningrad. P.51–53 [in Russian].
- Gambaryan P.P. 1978. [Review of the book Galantsev V.P. (1977) "Evolution of adaptations of diving animals"] // Zoologicheskii Zhurnal. T.57. No.12. P.1903–1904 [in Russian].
- Gambaryan P.P., Zubtsova G.E., Zykova L.Yu. & Krasts I.V. 1978. [A special type of loosening of the ground by incisors of the five-fingered jerboas] // Zoologicheskii Zhurnal. T.57. No.5. P.806–808 [in Russian].
- Gambaryan P.P., Pechenyuk A.D., Kartashova T.M., Krasts I.V. & Zykova L.Yu. 1978. [Evolution of asymmetric gaits in mammals] // Trudy Zoologicheskogo Instituta AN SSSR. T.75. P.78–105 [in Russian].
- Gambaryan P.P. 1979. [Methods of the studying of muscle function in adaptive changes of the movement apparatus] // Manzii S.F. (ed.). [Locomotion of animals and biomechanics of the musculoskeletal apparatus. (Materials of the First All-Union seminar)]. Kiev: Naukova Dumka. P.14–18 [in Russian].
- Gambaryan P.P. 1979. [The role of functional morphology in taxonomy] // Sokolov V.E. (ed.). [State and prospects of morphology development. Materials to the All-Union Conference]. Moskva: Nauka. P.374–375 [in Russian].
- Gambaryan P.P., Krasts I.V. & Dzerzhinskii F.Ya. 1979. [Methods of recording of the animals locomotion on the purpose of studying the biomechanics of the propulsion apparatus] // Manzii S.F. (ed.). [Locomotion of animals and biomechanics of the musculoskeletal apparatus. Materials of the first All-Union seminar]. Kiev: Naukova Dumka. P.18–21 [in Russian].
- Krasts I.V., Gambaryan P.P. & Zykova L.Yu. 1979. [Some methods of studying the running of animals] // Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody. Otdel Biologicheskii. T.84. No.3. P.40–45 [in Russian].
- Gambaryan P.P., Gudkov V.M. & Sukhanov V.B. 1979. [Skeletal musculature] // Sokolov V.E. (ed.). [Wisent. Morphology, Systematics, Evolution, Ecology]. Moskva: Nauka. P.196–291 [in Russian].
- Gambaryan P.P. & Sukhanov V.B. 1979. [To the biomechanics of the locomotor apparatus of the wisent] // Sokolov V.E. (ed.). [Wisent. Morphology, Systematics, Evolution, Ecology]. Moskva: Nauka. P.292–327 [in Russian].
- Sukhanov V.B. & Gambaryan P.P. 1979. [The state and tasks of the morphology of vertebrates and role of evolutionary, ecological and functional approaches in their solution] // Sokolov V.E. (ed.). [State and prospects of morphology development. Materials to the All-Union conference]. Moskva: Nauka. P.27–33 [in Russian].
- Aristov A.A., Krasts I.V. & Gambaryan P.P. 1980. [Biomechanics of turning of the large jerboa (*Allactaga jaculus* Pall.)] // Trudy Zoologicheskogo Instituta AN SSSR. T.91. P.56–62 [in Russian].
- Gambaryan P.P., Kucheruk V.V. & Tupikova N.V. 1980. [Adaptive features of the preorbital complex of pygmy jerboas] // Trudy Zoologicheskogo Instituta AN SSSR. T.91. P.52–55 [in Russian].
- Gambaryan P.P., Potapova E.G. & Fokin I.M. 1980. [Morphofunctional features of the muscular apparatus of the head in the jerboas (to the justification of the natural system of Dipodoidea, Rodentia, Mammalia)] // Trudy Zoologicheskogo Instituta AN SSSR. T.91. P.3–51 [in Russian].
- Gambaryan P.P. 1981. [Locomotion] // Slonim A.D. (ed.). [Ecological Physiology of Animals. Part 2]. Leningrad: Nauka. P.341–378 [in Russian].
- Gambaryan P.P. & Aristov A.A. 1981. [Musculature and skeleton] // Bashenina N.V. (ed.). [European Red Vole]. Moskva: Nauka. P.53–84 [in Russian].

- Gambaryan P.P. 1982. [The position of the genus of zokors (*Myospalax*) in the system of Rodentia. Communication 1. Muscles of the head and subcutaneous muscles] // Trudy Zoologicheskogo Instituta AN SSSR. T.115. P.3–22 [in Russian].
- Avetyan A.S., Gambaryan P.P. & Ter-Minasyan M.E. 1982. [In memory of Sergei Konstantinovich Dal' (1904–1982)] // Biologicheskii Zhurnal Armenii. T.35. No.9. P.765–767 [in Russian].
- Gambaryan P.P. 1983. [Superfamily groupings of the order Rodentia] // Gromov I.M. (ed.). [Rodents. Materials of the Sixth All-Union Conference]. Leningrad: Nauka. P.74–76 [in Russian].
- Aristov A.A., Gambaryan P.P. & Mamonov S.O. 1983. [Adaptations to climbing in the genus *Rattus* (Muridae, Rodentia)] // Gromov I.M. (ed.). [Rodents. Materials of the 6th All-Union Conference]. Leningrad: Nauka. P.140–141 [in Russian].
- Sukhanov V.B. & Gambaryan P.P. 1984. [General, functional and ecological morphology of mammals] // Sokolov V.E. & Kucheruk V.V. (eds.). [Theriology in the USSR]. Moskva: Nauka. P.30–73 [in Russian].
- Sukhanov V.B., Gambaryan P.P. & Klykov V.I. 1986. [Specificity of the forelimb skeleton of manatee] // Sokolov V.E. (ed.). [Manatee. Morphological Adaptations]. Moskva: Nauka. P.157–187 [in Russian].
- Gambaryan P.P. & Sukhanov V.B. 1986. [The structure, functions and adaptive features of the skeletal musculature of manatee] // Sokolov V.E. (ed.). [Manatee. Morphological Adaptations]. Moskva: Nauka. P.188–305 [in Russian].
- Gambaryan P.P. & Zherebtsova O.V. 1988. [On the ways of transformation of the hypodermic musculature in connection with the appearance of the needles in insectivores (Insectivora, Erinaceidae and Tenrecidae). Communication 1] // Zoologicheskii Zhurnal. T.67. No.1. P.79–89 [in Russian].
- Gambaryan P.P. & Zherebtsova O.V. 1988. [On the ways of transformation of the hypodermic musculature in connection with the appearance of the needles in insectivores (Insectivora, Erinaceidae and Tenrecidae). Communication 2] // Zoologicheskii Zhurnal. T.67. No.2. P.189–199 [in Russian].
- Gambaryan P.P. 1989. [Evolution of the Facial Musculature of Mammals]. Leningrad: Nauka. 148 p. [in Russian]
- Gambaryan P.P. 1990. [Modes of motion as the basis for the formation of the chord type] // Trudy Zoologicheskogo Instituta AN SSSR. T.215. P.3–8 [in Russian].
- Gambaryan P.P. 1993. [Facial musculature] // Sokolov V.E. & Lavrov N.P. (eds.). [Muskrat. Morphology, Systematics, Ecology]. Moskva: Nauka. P.112–120 [in Russian].
- Gambaryan P.P. & Gasc J.P. 1993. Adaptive properties of the musculoskeletal system in the mole-rat *Myospalax myospalax* (Mammalia, Rodentia), cinefluorographical, anatomical, biomechanical analyses of burrowing // Zoologische Jahrbücher. Abteilung für Anatomie und Ontogenie der Tiere. Vol.123. No.4. P.363–401.
- Kielan-Jaworowska Z. & Gambaryan P.P. 1994. Postcranial anatomy and habits of Asian multituberculate mammals // Fossils and Strata. Vol.36. P.1–92.
- Barsegyan A.M., Arevshatyan I.G., Akopyan Zh.A., Gambaryan P.P. & Ziroyan A.N. 1995. [The role of the collection of living plants of the “Plot of flora and vegetation of Armenia” (Botanical Garden of Yerevan) in the conservation of rare and endangered species and plant communities] // Botanicheskii Zhurnal. T.80. No.2. P.51–57 [in Russian].
- Gambaryan P.P. & Kielan-Jaworowska Z. 1995. Masticatory musculature of Asian taeniolabidoid multituberculate mammals // Acta Palaeontologica Polonica. Vol.40. No.1. P.45–108.
- Gambaryan P.P. & Kielan-Jaworowska Z. 1997. Sprawling versus parasagittal stance in multituberculate mammals // Acta Palaeontologica Polonica. Vol.42. No.1. P.13–44.
- Gambaryan P.P. 1998. [Evolution of the scapulocoracoid in synapsid tetrapods] // Zhurnal Obshchei Biologii. T.59. No.6. P.623–639 [in Russian].
- Gambaryan P.P. 1999. [New information on the evolution of tetrapod locomotion] // [Abstracts of Papers. Reporting scientific conference of the Zoological Institute on the results of the work of 1998 (April 6–8, 1999)]. Sankt-Peterburg: Nauka. P.17–18 [in Russian].
- Gambaryan P.P. & Korolev V.N. 1999. Lizard jump (*Lacerta agilis*, Lacertilia, Squamata) // Russian Journal of Herpetology. Vol.6. No.2. P.92–94.
- Platonov V.V., Gambaryan P.P. & Karpov N.A. 1999. [Changes in the skeleton of *Desmana moschata* in captivity] // [Rare species of mammals in Russia and adjacent territories. Abstracts of papers of the international meeting (April 9–11, 1997, Moscow)]. Moskva: P.71 [in Russian].
- Gambaryan P.P. & Averianov A.O. 2001. Femur of a Morganucodontid mammal from the Middle Jurassic of Central Russia // Acta Palaeontologica Polonica. Vol.46. No.1. P.99–112.
- Gambaryan P.P. 2002a. Obituary. Alexei Alexandrovich Aristov (1955–2001) // Russian Journal of Theriology. Vol.1. No.1. P.70–71.
- Gambaryan P.P. 2002b. [Evolution of tetrapod locomotion] // [Abstracts of Papers. Reporting scientific conference of the Zoological Institute on the results of the work of 2001 (April 2–4, 2002)]. Sankt-Peterburg: Nauka. P.14–15 [in Russian].
- Gambaryan P.P. 2002c. [Evolution of tetrapod locomotion] // Zhurnal Obshchei Biologii. T.63. No.5. P.426–445 [in Russian].
- Gambaryan P.P. 2002d. [Ways of adaptive changes in the claws of diggers] // Zoologicheskii Zhurnal. T.81. No.8. P.978–990 [in Russian with English summary].
- Gambaryan P.P., Aristov A.A., Dixon J.M. & Zubtsova G.Ye. 2002. Peculiarities of the hind limb musculature in monotremes: an anatomical description and functional approach // Russian Journal of Theriology. Vol.1. No.1. P.1–36.
- Gambaryan P.P. & Gambaryan I.S. 2002. [Mathematical model of evolution of tetrapod locomotion] // Doklady Akademii Nauk. T.386. No.4. P.562–564 [in Russian].
- Gambaryan P.P., Gasc J.P. & Renous S. 2002. Cinefluorographical study of the burrowing movements in the common mole, *Talpa europaea* (Lipotyphla, Talpidae) // Russian Journal of Theriology. Vol.1. No.2. P.91–110.

- Gambaryan P.P., Averianov A.O., Maschenko E.N. & Leshchinskiy S.V. 2004. Mammalian humerus from the Early Cretaceous of West Siberia // *Russian Journal of Theriology*. Vol.3. No.2. P.51–58.
- Gambaryan P.P., Zherebtsova O.V. & Platonov V.V. 2004. Adaptive alterations of the axial skeleton and muscles in some burrowing mammals // *Proceedings of the Zoological Institute of RAS*. Vol.300. No.1. P.69–76.
- Gambaryan P.P., Zherebtsova O.V. & Platonov V.V. 2005. Morphofunctional analysis of the cervical-thoracic region in some burrowing mammals // *Russian Journal of Theriology*. Vol.4. No.1. P.13–41.
- Pridmore P.A., Rich T.H., Vickers-Rich P. & Gambaryan P.P. 2005. A tachyglossid-like humerus from the Early Cretaceous of south-eastern Australia // *Journal of Mammalian Evolution*. Vol.12. No.3–4. P.359–378.
- Gambaryan P.P., Zherebtsova O.V., Perepelova A.A. & Platonov V.V. 2009. Pes muscles and their action in giant anteater *Myrmecophaga tridactyla* (Myrmecophagidae, Pilosa) compared with other plantigrade mammals // *Russian Journal of Theriology*. Vol.8. No.1. P.1–15.
- Gambaryan P.P., Zherebtsova O.V. & Platonov V.V. 2010. [Convergent development of subcutaneous muscles in moles and golden moles] // *Zhurnal Obshchei Biologii*. Vol.71. No.3. P.163–175 [in Russian with English summary].
- Gambaryan P.P., Zherebtsova O.V., Platonov V.V. & Perepelova A.A. 2011. [The structure and functions of the deep flexor of the hand fingers in digging mammals] // *Zoologicheskii Zhurnal*. T.90. No.10. P.1255–1267 [in Russian with English summary].
- Perepelova A.A. & Gambaryan P.P. 2011. [Features of the structure of the hindlimb musculature in *Diplomesodon* shrew] // [Theriofauna of Russia and adjacent territories. The 9th Congress of the Theriological Society of the Russian Academy of Sciences (February 1-4, 2011, Moscow)]. Moskva: KMK. P.367 [in Russian with English summary].
- Gambaryan P.P. & Perepelova A.A. 2011. [The causes of evolutionary transformations of the locomotor apparatus in moles] // [Abstracts of Papers. Reporting scientific conference of the Zoological Institute on the results of the work of 2010 (April 12–14, 2011)]. Sankt-Peterburg: Nauka. P.11–12 [in Russian].
- Zherebtsova O.V., Gambaryan P.P. & Davydova A.N. 2011. Facial musculature and skin in *Laonastes aenigmamus*: new traits to portrait of the relict form // Abstracts of papers. Sixth European Congress of Mammalogy (July 19–23, 2011, Paris). Paris. P.65.
- Gambaryan P.P. & Kuznetsov A.N. 2013. An evolutionary perspective on the walking of the long-beaked echidna // *Journal of Zoology*. Vol. 290. No.1. P.58–67.
- Gambaryan P.P., Perepelova A.A., Kuznetsov A.N., Panyutina A.A. & Pechenyuk A.D. 2013. [Features of swimming in muskrat and Russian desman] // [Abstracts of Papers. Reporting scientific conference of the Zoological Institute on the results of the work of 2012 (April 9–11, 2013)]. Sankt-Peterburg: Nauka. P.26–27 [in Russian].
- Gambaryan P.P., Zherebtsova O.V. & Perepelova A.A. 2013. Comparative analysis of forelimb musculature in *Laonastes aenigmamus* (Rodentia: Diatomyidae) // *Proceedings of the Zoological Institute of RAS*. Vol.317. No.3. P.226–245.
- Gambaryan P.P. & Zherebtsova O.V. 2014. Short muscles of the hand and foot in *Laonastes aenigmamus* (Rodentia: Diatomyidae) and some other rock-dwellers // *Russian Journal of Theriology*. Vol.13. No.2. P.83–95.
- Gambaryan P.P., Kuznetsov A.N., Panyutina A.A. & Gerasimov S.V. 2015. Shoulder girdle and forelimb myology of extant Monotremata // *Russian Journal of Theriology*. Vol.14. No.1. P.1–56.
- Gambaryan P.P., Zherebtsova O.V. & Platonov V.V. 2015. [Two directions of specialization in digging in insectivorous mammals (Talpidae, Chrysochloridae)] // *Proceedings of the Zoological Institute of RAS*. Vol.319. No.3. P.351–362 [in Russian with English summary].