Participation of a Russian scientist in Heritage Expeditions voyage

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**Information Paper submitted by the Russian Federation**

New Zealand travel company Heritage Expeditions Limited invited a Russian scientist to participate in the Antarctic voyage in the Ross Sea area from January 8 to February 6, 2020.

The Arctic and Antarctic Research Institute, Roshydromet, which, according to the order of the Government of the Russian Federation, is a state operator organizing and carrying out activities in Antarctica, sent Dr. Igor Chupin, PhD, an ornithologist, a member of the 65th Russian Antarctic Expedition, from the Institute of Systematics and Ecology of Animals of the Siberian Branch of the Russian Academy of Science.

The tourist cruise on a chartered Russian passenger ship “Akademik Shokalsky” went along the route as follows: south-western tip of New Zealand (Port Bluff) – Snares Islands – Auckland island – Macquarie island – Ross Sea – Campbell island – southwestern tip of New Zealand.

The research objectives included studying of populations and large-scale surveys of marine animals along the route of the passenger ship “Akademik Shokalsky”, collecting of data to monitor the impact of tourism activities on the Antarctic environment.

Ornithological and nature conservation works along the latitudinal transect in the western part of the Pacific Ocean sector of the Southern Ocean and in the Ross Sea made it possible to reveal the seasonal characteristics of the distribution of seabirds and mammals during the Antarctic summer. In places of short-term landings on the coast of Antarctica, Antarctic and subantarctic islands, a quantitative characterization of the colonies of seabirds and coastal seals was given. When studying the impact of tourist activity on the populations of seabirds and mammals, recommendations for their protection are given.

The registration of marine fauna, its distribution and abundance gave an idea of the stocks of krill, an important element of the nutritional chain in the Ross Sea area – the area, which is poorly studied by Russian scientists. During this period no significant accumulations of krill was observed along the vessel's route in the open waters of the Ross Sea. The lack of krill stocks in the Ross Sea area is likely to have affected the number of fin whales, minke whales and humpback whales. At this time, water “bloom” was observed. The color of the water had a greenish tint, which indicated the mass reproduction of phytoplankton and the possibility of further development of zooplankton on its basis.

During the survey of seabirds and mammals, the vessel covered 2,360 km; 7,593 sightings, 43 bird species; and 116 sightings, 12 species of mammals, mainly cetaceans were recorded.

The research materials were included in the scientific report of the 65th seasonal Russian Antarctic expedition (Igor Chupin. Species composition, seasonal dynamics, distribution and abundance of seabirds and mammals along the route of the passenger ship “Akademik Shokalsky” // Report of the 65th seasonal RAE. – St. Petersburg, 2020, 59 p.), located in the State Fund of the State Research Center of the AARI. Currently, a number of articles on these studies have been prepared for publication in scientific journals.

The routes of marine tour operators cover many inaccessible pelagic regions and islands of the world's oceans, which are of great scientific interest. On the other hand, the participation of scientists in tourist cruises allows tourists to better understand the nature of Antarctica, to feel the involvement in its research and to feel the relationship between man and nature.

The experience of such cooperation between scientists and travel companies makes it possible to conduct scientific research without organizing special expeditions and attracting additional funds.

The Russian Antarctic Expedition expresses its gratitude to the Heritage Expeditions tour operator, to Ambassador Stuart Prior (New Zealand head Antarctic Policy 1992 – 1999; New Zealand Ambassador to Russia 2003-2006) and to Ambassador Georgy V. Zuev for organizing the participation of a Russian scientist in a tourist voyage.