

# High degree of resistance to antibiotics in Arctic birds

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In the latest issue of the journal *Emerging Infectious Diseases*, Swedish researchers report that birds captured in the hyperboreal tundra, in connection with the tundra expedition “Beringia 2005,” were carriers of antibiotics-resistant bacteria. These findings indicate that resistance to antibiotics has spread into nature, which is an alarming prospect for future health care.

The scientists took samples from 97 birds in northeastern Siberia, northern Alaska, and northern Greenland. These samples were cultivated directly in special laboratories that the researchers had installed onboard the icebreaker Oden and were further analyzed at the microbiological laboratory at the Central Hospital in Växjö, Sweden.

“We were extremely surprised,” says Björn Olsen, professor of infectious diseases at Uppsala University and at the Laboratory for Zoonosis Research at the University of Kalmar.

“We took samples from birds living far out on the tundra and had no contact with people. This further confirms that resistance to antibiotics has become a global phenomenon and that virtually no region of the earth, with the possible exception of the Antarctic, is unaffected.”

The researchers’ hypothesis is that immigrating birds have passed through regions in Southeast Asia, for example, where there is a great deal of antibiotics pressure and carried with them the resistant bacteria to the tundra.

“We already knew that birds in the Western world can be carriers of bacteria that are resistant to antibiotics, but it’s alarming to find that these bacteria exist among birds out on the tundra,” says Jonas Bonnedahl, a physician infectious specializing in infectious diseases in Kalmar and one of those participating in the expedition.

“Our findings show that resistance to antibiotics is not limited to society and hospitals but is now spreading into the wild. Escalating resistance to antibiotics over the last few years has crystallized into one of the greatest threats to well-functioning health care in the future.”

Source: Uppsala University

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