

University of Prince Edward Island

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Summary of Dissertation

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Causes of mortality in Northern Gannets (*Morus bassanus*) collected in Atlantic Canadian waters between 1990 and 2017

The Northern Gannet is the largest member of the Sulidae family, which forages shoaling pelagic fish by plunge-diving at astonishingly high speed of up to 100 km/h and breeds in large colonies in the Canadian Maritimes and northwestern Europe. Canada is home to a subpopulation of Northern Gannets currently estimated at 200,000 to 300,000 breeding adults.

Although the Northern Gannet has been classified as a species of least concern, there is only sporadic data on past and current threats faced by the Canadian subpopulation. Our objective was to identify and analyze the main causes of mortality in Northern Gannets found dead, injured or sick in the Canadian Maritime Provinces, using a database of 313 necropsy cases reported between 1990 and 2018.

Based on case history, circumstantial evidence, necropsy reports and, when relevant, histopathology reports and ancillary tests, a primary diagnosis (cause of death) and, in some cases, one or more secondary diagnoses were assigned to each case.

Human-related causes of death were the most commonly identified primary diagnoses (88 gannets; 28%), followed by decreasing order of importance by trauma of unknown cause, emaciation without an underlying cause, infections, ischemic leg necrosis and miscellaneous diagnoses.

The most common secondary diagnoses were subcutaneous acariasis, renal coccidiosis, as well as muscular and myocardial sarcocystosis.

Results suggest that human activity is an important threat to the Canadian northern gannet subpopulation and reduction of human disturbances through the implementation of comprehensive protection programs, especially pertaining to fisheries, would contribute to the protection of the North American population of Northern Gannets.

Presentations

Decelles N, Crane M, Gergye C, Pinelli C. Mucinous Adenocarcinoma of the Ileocecal Junction with Intraperitoneal Metastases in a Rhesus Macaque (*Macaca mulatta*). American College of Veterinary Pathologists/American Society for Veterinary Clinical Pathology (ACVP/ASCVP) Annual Meeting, San Antonio, TX, 2019.

Decelles N. Significant pathologic findings in Northern Gannets collected in Atlantic Canadian waters. Winter seminar series of the Office of Graduate Studies of the Atlantic Veterinary College, Charlottetown, January 2019.

Decelles N, Hester ML, Cusack LM, Rabb M, Martinson SA. Mycobacterial encephalitis, pneumonia and splenitis with splenic intrahistiocytic crystal deposition in a domestic rabbit (*Oryctolagus cuniculus*). American College of Veterinary Pathologists/American Society for Veterinary Clinical Pathology (ACVP/ASCVP) Virtual Annual Meeting, 2021.

Decelles N. Causes of mortality in Northern Gannets (*Morus bassanus*) collected in Atlantic Canadian waters between 1990 and 2017. Winter seminar series of the Office of Graduate Studies of the Atlantic Veterinary College, Charlottetown, March 2022.