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Wildlife and Fish Pathology

HEALTH STATUS OF YOUNG BARNACLE GEESE (*BRANTA LEUCOPSIS*) FROM MIGRATORY AND SEDENTARY POPULATIONS

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Introduction: Migratory animals switch between habitats to optimize food availability and minimize predation and disease risk. Recent changes in agriculture and land use on the northwest European coast have altered the living conditions and contributed to the establishment of new sedentary populations of geese that have abandoned their migratory behaviour. Young geese from these populations grow slowly compared with their Arctic migratory conspecifics. The aim of this study was to analyze potential differences in health status between young barnacle geese (*Branta leucopsis*) from the Arctic Svalbard and the temperate Netherlands.

Materials and Methods: Sixteen barnacle goslings from the Arctic Svalbard (migratory) and 16 birds from the temperate Netherlands (sedentary) population were raised within their natural environment. Upbringing areas were exposed to parasites shed naturally from wild conspecifics. Body mass and size were measured weekly until fledging, followed by post-mortem examination to analyze the health status.

Results: The sedentary group showed significantly more histopathological changes in liver, kidney and intestine, mainly consisting of mild to severe lymphoplasmacytic to eosinophilic infiltrates and presence of intralesional parasites in kidney and intestines in addition to a decreased growth rate.

Conclusions: The young barnacle geese of the sedentary population in the Netherlands have an increased risk of parasite infestations, which might affect health status in combination with a lower growth rate compared with the young barnacle geese of the Arctic migratory population. This suggests that low health status is a factor contributing to the observed slower growth.

VIBRIO TAPETIS ISOLATED FROM VESICULAR SKIN LESIONS IN DOVER SOLE (*SOLEA SOLEA*)

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Introduction: *Vibrio tapetis* is the causative agent of brown ring disease in bivalves, but has also been isolated from cultivated fish during mortalities on farms. Here we describe the first isolation of *V. tapetis* from wild-caught and subsequently captive-held Dover sole.

Materials and Methods: Dover sole caught in the North Sea were transferred to experimental housing facilities and kept in groups of four to eight fish. One week after arrival some fish developed multifocal circular grey–white skin discolourations evolving into vesicular lesions and subsequent ulcers on the pigmented side. Samples of skin lesions were taken for histological and bacteriological examination.

Results: The vesicular lesions presented as dermal fluid-filled spaces with collagen necrosis and a mixed inflammatory infiltrate. Large numbers of small rod-shaped bacteria, up to 1.5 µm in length, were present in the vesicle. There was mild bacterial invasion of the underlying connective tissue with an interstitial mononuclear infiltration. Ulcers were well-delineated by granulation tissue, infiltrated with large numbers of mononuclear cells and moderate numbers of neutrophils. Numerous bacteria with different morphology bordered the lesions. Pure bacterial cultures were isolated from intact vesicles and these were *V. tapetis* as demonstrated by serotyping, DNA–DNA hybridization and (REP/ERIC)-PCR.

Conclusions: This is the first report of isolation of *V. tapetis* from skin vesicles in Dover sole. This agent may have played a role in the development of the skin lesions.