

Livestock grazing and predatory birds combined may trouble farmland wading birds

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Ecologists have shown that high densities of predatory birds together with high levels of livestock grazing can result in breeding failure among farmland wading birds.

The researchers from the University of Aberdeen and the Centre for Ecology and Hydrology in Banchory have shown what farmers have

already suspected - that gulls, crows and farmland waders do not always go well together.

But the scientists demonstrate that it is the combination of predatory birds and high grazing levels that affects the breeding of farmland-breeding wading birds such as oystercatcher and lapwing, culturally highly-valued birds which are in steep decline.

The researchers studied farmlands in Shetland that were part of a Governmental agri-environment scheme implemented across Europe to counter biodiversity loss.

The schemes offer farmers financial incentives in return for changes in how they farm the land, for example reducing their levels of livestock grazing.

But the schemes don't really address the problems of predatory birds as recognised by farmers and hence uptake of these schemes can be variable.

Now researchers believe these schemes should be made more flexible - rather than taking a blanket approach - so they can be tailored for individual farmland areas and help halt the birds' decline.

Dr. Rene van der Wal of the University's Aberdeen Centre for Environmental Sustainability (ACES) said: "Our research has shown that where the density of predatory birds and livestock grazing is high, wading birds such as lapwing and oystercatchers tend to suffer breeding failure.

"However where grazing pressure was low and grasses therefore sufficiently tall, waders kept up their territories despite the presence of numerous predatory birds.

"Our findings imply that agri-environment schemes may reap greatest benefit for waders by reducing livestock rate where gulls and crows are abundant."

Dr. Van der Wal added: "Many biodiversity schemes fail either to attract farmers or achieve their objectives and scheme uptake and implementation can depend on the individual farmer's believe that environmental benefits will indeed arise.

"The effectiveness of agri-environment schemes may be greater if farmers believe in what they are asked to do.

"Our results reflect both the views of farmers and government agencies which indicate that future agri-environment schemes would benefit from genuine stakeholder involvement to maximise scheme uptake, implementation and the beneficial effects on biodiversity."

The research appears in this month's *Royal Society journal Biology Letters*.

Source: University of Aberdeen

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