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NOTES ON NORTHERN GOSHAWKS NESTING IN AN ABANDONED HERONRY IN WALES

In Britain, Northern Goshawks (*Accipiter gentilis*) nest in a variety of wooded habitats including plantations (S.J. Petty 1989, Forestry Commission Bulletin 81, Her Majesty's Stationery Office, London, UK; E.P. Toyne 1994, Ph.D. dissertation, Imperial College, London, UK). In Wales, they usually build their own nests or build on old Common Buzzard (*Buteo buteo*) and European Sparrowhawk (*Accipiter nisus*) nests. This paper presents the first account of goshawks using the nests of Grey Herons (*Ardea cinerea*). We are aware of only one other instance of an accipiter using a heron nest. This was of a European Sparrowhawk that successfully nested on a Little Egret's (*Egretta garzetta*) nest while the egrets occupied the heronry (H. Hafner 1978, *La Terre at La Vie* 32:279–289).

The heronry was situated in Wales in an area comprised of conifer plantations, hill sheep farms, moorland and watercourses. The area was semi-upland (80–500 m elevation) and the majority of goshawk nesting territories were around 250 m (E.P. Toyne 1994, Ph.D. dissertation, Imperial College, London, UK). The heronry was in a 3-ha stand of Sitka Spruce (*Picea sitchensis*) planted in 1950 in a managed forest (>1000 ha). The stand was approximately 800 m from a reservoir and 5 km from the nearest town.

In 1989, the heronry was used by approximately 25 pairs of breeding herons. The herons began to use the heronry again in April 1990 but, shortly after their eggs were laid, strong winds blew them from the nests and heron eggs were found littering the ground. After the herons had left the heronry, a goshawk was found nesting in one of the abandoned heron nests. Over the next seven breeding seasons, goshawks bred in a total of six abandoned heron nests laying an average of 3.3 eggs (range = 2–4) and fledging an average of 2.5 young (range = 1–4).

All nest trees were Sitka Spruce and all heron nests were made of larch (*Larix sp.*) branches. Goshawks refurbished these nests with larch branches and lined the nest cups with foliage from larch, spruce and Douglas-fir (*Pseudotsuga menziesii*). Nest measurements were similar to other goshawk nests built on whorls of larch and conifer trees (length: 0.94–1.20 m, breadth: 0.83–1.00 m, depth: 0.25–0.50 m, $N = 3$). Five of the six nests that were used were well concealed in trees with dense canopies. The other nest was in an open, thin-crowned tree.

It was unclear why the herons moved from the heronry and where they moved. Herons often relay after egg loss (C. Voisin 1991, The herons of Europe, T. & A.D. Poyser, London, UK) so it was unlikely they deserted their colony after losing their clutches during the wind storm. Although there is no record of goshawks in Britain killing herons (M. Marquiss and I. Newton 1982, *British Birds* 75:243–260; E.P. Toyne 1994, Ph.D. dissertation, Imperial College, London, UK), it is plausible that the pair of goshawks disturbed the herons enough to make them move elsewhere. At another site within the study area, herons moved after goshawks first nested within 500 m of a heronry indicating that the presence of goshawks may cause herons to desert their nesting areas.

Goshawks are known to use existing nests, including artificial ones (P. Saurola 1978, Pages 72–80 *in* T.A. Geer [Ed.], Bird of prey management techniques, British Falconer's Club, Oxford, UK; S.J. Petty 1989, Forestry Commission Bulletin, Her Majesty's Stationery Office, London, UK). In our study, larch appeared to be the preferred nest tree of goshawks with 61.2% of 116 nesting attempts in larch as opposed to 15.5% in Sitka spruce (E.P. Toyne 1994, Ph.D. dissertation, Imperial College, London, UK). While larch trees were nearby the heronry, the presence of heron nests appears to have attracted goshawks to the spruce site.

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