

The first breeding record of Glossy Ibises *Plegadis falcinellus* for Cyprus

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The Glossy Ibis *Plegadis falcinellus* is a common passage migrant in Cyprus particularly during spring, (Feb) Mar–May, with smaller numbers staging at the wetlands in autumn, Aug–Sep (Oct). Large flocks migrate off the coast of Cyprus during autumn (Flint & Stewart 1992). Migrating flocks of the species are usually observed flying around the coast or over-flying the island but during wet springs, when coastal wetlands are waterlogged, these flocks might stage for a week or more. However, ten pairs of Glossy Ibises were observed nesting at the Ayios Lucas lake heronry, Famagusta, April–July 2010, the first breeding record for Cyprus (Miltiadou 2010).

Although only a small percentage of the global population of Glossy Ibises breeds in Europe that population has exhibited a moderate decline and is evaluated by BirdLife International as a ‘Species of European Concern, Declining’ (Burfield & van Bommel 2004). It breeds in three eastern Mediterranean countries around Cyprus: Turkey (500–1000 pairs), Greece (150–200 pairs) and Israel (c300 pairs) (Cramp & Simmons 1978, Burfield & van Bommel 2004).

Ayios Lucas lake (Plate 1), aka Famagusta Freshwater lake, is a lake that was created by damming part of a seasonal lake basin situated on the northwest side of Famagusta city at Limni, and is bordered on the north by the Nicosia–Famagusta motorway. It is part of a seasonal flood plain that opens into a brackish delta created by the joining of the Pediaeos and Yialias intermittent rivers. The delta spreads between Famagusta and Salamis and is located at the eastern end of the Mesaoria plain that runs across the middle of Cyprus.



Plate 1. Ayios Lucas lake, Famagusta, Cyprus, with part of heronry in background, 23 April 2010. © M Miltiadou



Plate 2. Breeding Cattle Egret *Bubulcus ibis*, Ayios Lucas lake, 7 July 2010. © M Miltiadou



Plate 3. Cattle Egret chicks *Bubulcus ibis* at nest, Ayios Lucas lake, 7 July 2010. © M Miltiadou

As the island's lowlands were submerged under the sea up to c100 000 years BP, the soil is saline with brackish plant communities (*Sueda vera*, *Arthrocnemum macrostachyum*) and saline 'flushes' are evident across the Mesaoria plain especially around and between Famagusta and Nicosia. The water of Ayios Lucas lake is predominantly brackish most years with the exception of 2010 when, due to heavy rainfall in winter and spring and pumping of water from Guenyeli dam, it was fresh. This dam was built in 1964 to retain water for agricultural purposes as all wetland areas in Cyprus naturally dry up by late spring. The water holding capacity of Ayios Lucas lake is 4 545 000 m³ and the lake covers c600 hectares at an elevation of 40 m asl (Dams of Cyprus <http://www.moa.gov.cy/moa/wdd/wdd.nsf/index>).



Plate 4. Cattle Egret *Bubulcus ibis* nesting pair, Ayios Lucas lake, 21 May 2010. © M Miltiadou

Ayios Lucas lake gained ornithological prominence during the early 21st century when it became the first nesting site for the Cattle Egret *Bubulcus ibis* on Cyprus (Plates 2–4), alongside a few pairs of nesting Squacco Herons *Ardeola ralloides*, Little Egrets *Egretta garzetta* and Black-crowned Night Herons *Nycticorax nycticorax* (Whaley & Dawes 2005). This heronry, located on partly drowned tamarisk bushes situated along the west side of the lake, has grown steadily in numbers since its discovery in 2003. Since 2006, Ayios Lucas lake has been included in the wetland sites surveyed monthly for waterbirds as part of the BirdLife Cyprus waterbird census (Miltiadou 2004, Miltiadou 2005–2010, Miltiadou 2011). The waterbird census has revealed that the site holds up to 8952 waterbirds annually of 59 species of which 27 species are in Annex I of the Birds Directive (2009/147/EU, ex 79/409/EEC). A total of 13 waterbird species nest there (predominantly Common Coot *Fulica atra*, Common Moorhen *Gallinula chloropus* and Little Grebe *Tachybaptus ruficollis*) of which 7 are in Annex I eg Squacco Heron *Ardeola ralloides*, Little Egret *Egretta garzetta*, Spur-winged Lapwing *Vanellus spinosus* and Black-winged Stilt *Himantopus himantopus* (Miltiadou 2005–2010, Miltiadou 2007, Miltiadou 2011).



Plate 5. Glossy Ibis *Plegadis falcinellus* adult, Ayios Lucas lake, 7 July 2010. © M Miltiadou



Plate 6. Glossy Ibis *Plegadis falcinellus* and Cattle Egret *Bubulcus ibis* heronry on tamarisk, Ayios Lucas lake, 7 July 2010. © M Miltiadou

On 23 April 2010, while conducting the monthly waterbird census for the site, I was surprised to observe several Glossy Ibises (*Plegadis falcinellus*) either carrying twigs in their beaks and flying towards the heronry or gathering twigs along the lake shore. These twigs were dried eucalyptus collected from the ground and formed the base structure of their nests. Because of the heavy rainfall during winter and spring the tamarisk islets were about half



Plate 7. Glossy Ibis *Plegadis falcinellus* feeding newly hatched nestling, Ayios Lucas lake, 21 May 2010. © M Miltiadou



Plate 8. Glossy Ibis *Plegadis falcinellus* at nest, Ayios Lucas lake, 21 May 2010. © M Miltiadou



Plate 9. Glossy Ibis *Plegadis falcinellus* nest with fledglings in close proximity to Cattle Egret nests, Ayios Lucas lake, 7 July 2010. © M Miltiadou



Plate 10. Glossy Ibis *Plegadis falcinellus* parent feeding fledglings, Ayios Lucas lake, 7 July 2010. © M Miltiadou



Plate 11. Large nestlings of Glossy Ibis *Plegadis falcinellus*, Ayios Lucas lake, 7 July 2010. © M Miltiadou



Plate 12. Glossy Ibis *Plegadis falcinellus* fledgling, Ayios Lucas lake, 7 July 2010. © M Miltiadou



Plate 13. Glossy Ibis *Plegadis falcinellus* fledglings, normal and white-throated morphs, Ayios Lucas lake, 7 July 2010. © M Miltiadou

submerged in water (depth ≈ 2 m) with the lake itself almost flooding. These islets were crowded with nesting Cattle Egrets and between and above them I noticed four pairs of Glossy Ibises on already constructed nests which were mostly built at mid-height in the bushes (Plate 6). That day I counted in total 163 Glossy Ibises busily feeding along the shores of the lake (Miltiadou 2010). A follow-up census on 21 May revealed a total of ten nesting pairs of Glossy Ibises, of which six were feeding newly hatched chicks (Plate 7). The chicks were naked and all had black skins with sparse dull-black down. A count revealed 4–5 chicks per nest. The rest of the nesting pairs seemed to be still incubating eggs. The parent Glossy Ibises were flying to the flooded area north of the motorway in order to secure food for the chicks. The nests had already been lined with a thick top layer of rush stems (Plate 8). At this time it was very difficult to observe the chicks as the foliage of the tamarisk bushes was unusually thick presumably due to the high rainfall. Nests were spaced 5–10 m apart but in some cases were almost touching neighbouring Cattle Egret nests (Plate 9).

On 7 June, 6 pairs were each tending 3–6 fully feathered fledglings which were either perched on their respective nests or on branches below them, noisily begging for food (Plates 10 & 11). All fledglings had the usual banded beaks along with the white patch on



Plate 14. Little Egret fledglings attended by parent, Ayios Lucas lake, 7 July 2010. © M Miltiadou

the crown of the head, except for two that had a white throat patch as well (Plates 12 & 13). The remaining 4 pairs were still attending newly-hatched chicks at the nest. On 25 June, the 6 pairs were seen flying around the lake with their fledglings, parents usually leading them to the nearby wetland just north of the motorway and beyond. These families were eventually spotted at other coastal wetlands of Cyprus *eg* at Oroklini marsh, Akrotiri salt lake and Akhna dam, situated along the south of the island. Another four pairs were still catering for their unfledged young that were perched outside their nests and begging for food. By 26 July the remaining 4 pairs had fledged their young and were escorting them around the area to feed. Only 5 birds remained at the lake on 18 August. The total production of young was 46 fledged with 3–6 young per pair (1 pair 6 juveniles, 4 pairs 5 juvs, 3 pairs 4 juvs and 2 pairs 3 juvs). The other waterbird species nesting at the lake also had a successful year with *eg* 87 nesting pairs of Cattle Egrets with 218 young fledged (Table 1).

The Glossy Ibis nesting in Cyprus is part of a trend of various species of waterbirds nesting or even becoming resident in Cyprus during the early 21st century. Thus in 2002, migrants like the Common Tern *Sterna hirundo* and Little Tern *Sternula albifrons* nested after an absence of almost a century while Cattle Egret and Spur-winged Lapwing became resident in 2003 and Ferruginous Duck *Aythya nyroca* in 2005. Two migratory species have become annual breeders from 2003: Squacco Heron and Little Egret (Plate 14), while the Mallard *Anas platyrhynchos*, introduced in 1993, has spread around the island (Gordon 2002,

Table 1. Waterbird species that nested at Ayios Lucas lake, Famagusta, Cyprus, spring 2010.

Species	Pairs	Young fledged
Little Grebe <i>Tachybaptus ruficollis</i>	7	15
Black-crowned Night Heron* <i>Nycticorax nycticorax</i>	2	6
Squacco Heron* <i>Ardeola ralloides</i>	4	13
Cattle Egret <i>Bubulcus ibis</i>	87	218
Little Egret* <i>Egretta garzetta</i>	5	20
Glossy Ibis* <i>Plegadis falcinellus</i>	10	46
Mallard <i>Anas platyrhynchos</i>	1	6
Common Coot <i>Fulica atra</i>	27	68
Common Moorhen <i>Gallinula chloropus</i>	5	18
Black-winged Stilt* <i>Himantopus himantopus</i>	2	5
Spur-winged Lapwing* <i>Vanellus spinosus</i>	2	5

* Species on Annex I of the Birds Directive (2009/147/EU, ex 79/409/EEC)

Miltiadou 2006a & b, Miltiadou 2009, Miltiadou 2011). In 2009 the first pair of Red-crested Pochards *Netta rufina* nested on Cyprus while in 2010 we had this species nest again as well as two pairs of Northern Shovelers *Anas clypeata* (Christodoulides *et al* 2009, P Prastides pers obs). These aquatic species are opportunistic in their colonization behaviour and have clearly taken advantage of the opportunities offered by Cyprus's unpredictable weather conditions and some recent anthropogenic activities (construction of lowland dams, water treatment ponds and animal slurry ponds). Conversely, local wetlands have also suffered some serious negative anthropogenic activities that are threatening the survival of long-established resident waders like the Kentish Plover *Charadrius alexandrinus*.

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