

RARE COLOUR ABERRATION IN THE GUANAY CORMORANT *PHALACROCORAX BOUGAINVILLII*

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The occurrence of aberrant colorations such as melanism, leucism or albinism is rare in birds (Sage 1962, 1963). In seabirds, mainly melanism or leucism (also described as isabellinism) have been reported (Thompson *et al.* 2000, Everitt & Miskelly 2003, Bried & Mougeot 2004, Bried *et al.* 2005, Mancini *et al.* 2010). Albinism (*sensu* van Grouw 2006), a complete loss of all pigment in plumage and other body parts, is the most severe aberration in plumage patterns. It results in birds with white plumage and lack of pigment in soft parts (Sage 1962, Gross 1965) and is very rarely recorded in natural populations (Sage 1962, 1963, Gross 1965). Here, we report the first observation of an albino Guanay Cormorant *Phalacrocorax bougainvillii*, a near threatened species on the IUCN Red List (Birdlife International 2010).

Our observations were made on Isla Pescadores (11.775°S, 77.265°W), a small island located 7.5 km off the central coast of Peru, during fieldwork on Guanay Cormorants between 9 November and 2 December 2011. Guanay Cormorants were breeding in large colonies on the island (an estimated 61 000–80 600 breeding pairs, scientific staff of Agrorural, government service for rural development pers. comm.) incubating or rearing small to large chicks.

While we were on the island, we viewed and photographed colonies of cormorants twice a day from a fixed point (lighthouse), to avoid disturbing them. The albino individual was noticed while checking

breeding colonies with binoculars. Its plumage was pure white, without any pigmentation (Fig. 1). The bill and the legs lacked any pigmentation, resulting in a pink colour. The individual was a chick, 5–6 weeks old, with sibling and parents presenting the classical (white and black) plumage of the species. The individual seemed in good condition. We observed regular begging behaviour followed by feeding by parents, and did not note any obvious conflict between this albino individual and its conspecifics.

To our knowledge, our observation represents the first reported case of albinism (pure albinos *sensu* van Grouw 2006) for this species (Sage 1963, Gross 1965, Nelson 2005), despite the permanent field presence and weekly visits to the large Guanay Cormorant colonies by wardens of the island over many years (Murphy 1936, Vogt 1942, Duffy 1983, Tovar *et al.* 1987). This is the first case reported for the Isla Pescadores and the second for the Peruvian colonies (A. Melo & L. Dávila, pers. comm.); both observations involved chick or juvenile individuals. Adult albinos have not been reported for the species, nor is there any mention of albinism in the Guanay Cormorant in the literature, suggesting that this trait is very uncommon. The rarity of albinism may result from a higher mortality rate from predators and difficulty in obtaining a mate (Sage 1963). Furthermore, albino individuals can be difficult to detect due to very large size of the colonies (Fig. 2).

Among Phalacrocoracides, albinism has been reported for the Great Cormorant *Phalacrocorax carbo* (Goula & Parchas 2012), the



Fig. 1. Close-up of the albino Guanay Cormorant (*Phalacrocorax bougainvillii*) chick on Isla Pescadores, Peru. (November 2011, Karine Delord).



Fig. 2. General view of a small part of the colony of Guanay Cormorant with the albino on Isla Pescadores, Peru. (November 2011, Karine Delord).

Bank Cormorant *Phalacrocorax neglectus* (Nelson 2005) and the Cape Cormorant (Cook *et al.* 2012). The cause of variation in the incidence of albinism among families is unknown but “it ... appears to be in species that are both social in their breeding habits and also fairly sedentary” (Sage 1962), conditions that increase the chances of mating between individuals heterozygous for albinism. Albinism is known to have a genetic basis, and others factors such as diet or trauma are of minor significance (Sage 1962). Moreover, diet or trauma are unlikely to have been involved in this case because of the age of the bird and the condition of conspecifics observed in the colony. There was no obvious sign of malnutrition, and we observed feeding events by both parents. A more plausible explanation is that both parents possessed an albino allele, as hereditary albinism is generally a recessive character (Sage 1962).

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