Longevity records for the Wilson’s Plover (Charadrius wilsonia) in Guadeloupe (French West Indies)

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Photo: Frantz Delcroix
Abstract
We report a new longevity record for the Wilson's Plover (Charadrius wilsonia). A female presumed hatched during, or before, the 2009 breeding season was banded on 12 October 2010 at Pointe des Châteaux, Guadeloupe, French West Indies, and was last observed on 5 April 2023 at the same location it was banded. This observation establishes a new longevity record of at least 13 years and 7 months, which exceeds the previously known record of 10 years. Two other individuals, aged at least 11 years and close to 11 years, were also last observed in 2022. These three individuals still bred in Guadeloupe in 2022 and possibly two of them in 2023, and longevity is likely to exceed this current record as observations continue on the island.

Keywords
banding, Charadriidae, Guadeloupe, longevity, plover

Résumé
Nous présentons un nouveau record de longévité pour Charadrius wilsonia. Une femelle née pendant ou avant la saison de reproduction de 2009 et anillée le 12 octobre 2010 à la Pointe des Châteaux, Guadeloupe, a été vue pour la dernière fois le 05 avril 2023, au même endroit. Cette observation établit un nouveau record de longévité d'au moins 13 ans et 7 mois, ce qui dépasse l'actuel record connu de 10 ans. Deux autres individus, âgés de plus de 11 ans et de presque 11 ans, ont également été observés en 2022. Ces trois individus se sont produits en 2022 en Guadeloupe, et il est possible qu'ils se produisent de nouveau en 2023. Ces records sont susceptibles d'évoluer car les observations continuent sur l'archipel.

Mots clés
bagueage, Charadriidae, Guadeloupe, gravelot, longévité
Banding accompanied by long-term monitoring provides information on the dynamics of bird populations and their demography. Tracking of individual birds also provides information on the life expectancy of a species. The Wilson’s Plover (Charadrius wilsonia) is a shorebird (Charadriidae) only found in the Americas. Little is known about its demographic parameters due to limited long-term monitoring.

The Wilson’s Plover breeds annually in Guadeloupe, and was first recorded in 1998 (Levesque et al., 2005), after which a growth in the local population was recorded from 5 pairs in 1998 to at least 21 pairs in 2022. Individuals found in Guadeloupe are year-round residents with banded individuals seen throughout the year. Despite the increasing population, this species is considered locally threatened and Endangered as per the IUCN Red List (UICN Comité français et al., 2021). This is due to its small population size and the numerous threats affecting breeding success, especially predation by feral dogs and cats, as well as human disturbance, including eggs being crushed by walking.

A banding program was developed with the first captures taking place in 2005. Since then, 71 individuals have been banded, with the latest birds banded in June 2023. During the 2022 breeding season, 13 of the 40 monitored individuals were wearing a metal band. Chicks were banded if possible, with a total of 14 individuals banded during the last two breeding seasons.

**Observations**

On 12 November 2010, we banded a Wilson’s Plover at Pointe des Châteaux, on the main island of the Guadeloupe archipelago in the French West Indies (Fig. 1). The bird currently wears a metal ring (unique band code: M38594) and a yellow flag “FI” (previously yellow flag over a green flag “FN”), allowing its identification with binoculars (Fig. 2). The bird was considered to be an adult at the time of banding. Reproductive data for this species in Guadeloupe suggest that the latest hatchings take place in August. In this paper, we consider all individuals to have hatched in August in order to avoid overestimating age. This specific individual was seen more than 30 times since it was banded, with the latest sighting recorded on 5 April 2023 at Pointe des Châteaux. It has further been observed at the Petite Terre Islands (Fig. 1). This Wilson’s Plover has a minimum age of 13 years and 7 months, which exceeds the previously reported record of 10 years (United States Geological Survey, 2023). The individual bred successfully in 2022, ultimately fledging two offspring, and was sighted again in 2023 at its usual nesting site.

In addition, two other individuals, banded on 11 November 2011 at Pointe des Châteaux, also exceed the current longevity record. One of the two was marked and identified as M60001 (yellow flag “AS”) in November 2011, and was considered an adult at the time. It thus hatched during the 2010 breeding season or earlier and was subsequently reported at least 13 times since then; the last time on 17 February 2022 at Pointe des Châteaux, which brings its age to 11 years and 5 months minimum.

The third one, identified as M60003 (lost yellow flag “AZ”), was thought to have hatched during the 2011 breeding season. It was observed at least 16 times since then, the last time on 27 July 2022 at Pointe des Châteaux. Its age was at a minimum of 10 years and 10 months and was suspected to be breeding in both 2022 and 2023, however, this could not be verified due to its missing flag, complicating identification.

**Discussion**

This longevity record for the Wilson’s Plover demonstrates the importance of long-term banding programs and monitoring efforts for resident species. The three age records observed in Guadeloupe add to longevity data on this species, as current information is sparse. These new records bring information on the species closer to the average maximum longevity among plovers of the genus Charadrius (12–17 years; Colwell and Haig 2019). However, in some species longevity approaches or exceeds 20 years, such as the Kentish Plover (C. alexandrinus) at 19 years (Fransson et al. 2017), the Common Ringed Plover (C. hiaticula) at 20 years and 10 months (Fransson et al. 2017), and the Red-breasted Dotterel (C. obscurus) which may hold the longevity record for this species.
record for Charadriiformes at 41 years and 1 month (Goodwin 1991, McKenzie 1978).

Among closely related species in a clade consisting of 5 Ne-arctic and Neotropical species (dos Remedios et al., 2015), this new record for the Wilson’s Plover is similar to that of the Mountain Plover (C. montanus) at 12 years and 1 month (Colwell and Haig 2019). The other three species in this clade (Collared Plover C. collaris, Puna Plover C. alticola, and Two-banded Plover C. falklandicus) do not, to our knowledge, have documented longevity estimates.

The Wilson’s Plover population in Guadeloupe will continue to be monitored, and it is expected that this long-term study will yield new data on longevity, population dynamics, and habitat use in the archipelago of Guadeloupe.

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Literature Cited
UICN Comité Français, OFB, and MNHN. 2021. La Liste rouge des espèces menacées en France, Chapitres Faune de Guadeloupe, French West Indies, Guadeloupe.