

## A LARGE CONCENTRATION OF MASKED DUCKS (*NOMONYX DOMINICUS*) IN PUERTO RICO

JACK C. EITNIEAR<sup>1</sup> AND MICHAEL J. MOREL<sup>2</sup>

<sup>1</sup>218 Conway Drive, San Antonio, Texas, USA; e-mail: jce@cstbinc.org; <sup>2</sup>PO Box 694, Cabo Rojo, Puerto Rico 00623

**Abstract:** The little-studied Masked Duck (*Nomonyx dominicus*) inhabits ponds and small lakes covered with emergent or floating vegetation from southern Texas south through Central and South America (east of the Andes) to northern Argentina. We document a large flock of > 140 individuals at Laguna Cartagena National Wildlife Refuge, Lajas, Puerto Rico, on 5 February 2012.

**Key words:** Masked Duck, *Nomonyx dominicus*, population, Puerto Rico

**Resumen:** UNA GRAN CONCENTRACION DE PATOS DOMINICO (*NOMONYX DOMINICUS*) EN PUERTO RICO. El poco estudiado Pato Dominicano (*Nomonyx dominicus*) habita en las charcas y lagos pequeños cubiertos de vegetación emergente o flotante desde el sur de Tejas al sur a través del América Central y Sur (al este de los Andes) hasta el norte de Argentina. Documentamos un gran rebaño de > 140 individuos en el Refugio Nacional de Vida Silvestre de la Laguna Cartagena, ubicado en el municipio de Lajas, Puerto Rico, el 5 de febrero 2012.

**Palabras clave:** *Nomonyx dominicus*, Pato Dominicano, población, Puerto Rico

**Résumé :** FORTE CONCENTRATION D'ÉRISMATURES ROUTOUTOUS (*NOMONYX DOMINICUS*) À PORTO RICO. L'Éris-mature routoutou (*Nomonyx dominicus*), espèce peu étudiée, vit en Amérique centrale et en Amérique du Sud, depuis le sud du Texas jusqu'au nord de l'Argentine, sur des mares et des petits lacs couverts de végétation émergente ou flottante. Nous décrivons un groupe de plus de 140 individus observés sur la lagune de la réserve nationale de Laguna Cartagena, Lajas, Porto Rico, le 5 février 2012.

**Mots clés :** Éris-mature routoutou, *Nomonyx dominicus*, population, Porto Rico

The Masked Duck (*Nomonyx dominicus*) is a little-studied tropical relative of the Ruddy Duck (*Oxyura jamaicensis*). Normally occurring in small groups, the species inhabits ponds and small lakes covered with emergent or floating vegetation, from southern Texas south through Mexico, Central and South America, to northern Argentina (Del Hoyo *et al.* 1992, Livezey 1995, Johnsgard and Carbonell 1996, Anderson and Tacha 1999, Eitniear 1999). In this note we report the largest concentration to date of Masked Duck in the insular Caribbean.

### STUDY AREA

Established in 1989, Laguna Cartagena National Wildlife Refuge is 528.6 ha in size and part of the Caribbean Islands National Wildlife Refuge Complex. The refuge is located in the Municipality of Lajas (18°01' N, 67°06' W) in southwestern Puerto Rico. When full, the maximum depth of the lagoon is about 2 m, with the surface of the lagoon corresponding to the 11 m contour (above mean sea level) on a USGS topographic map (San German quadrangle), whereas the lagoon's bottom corresponds to the 9 m contour. Laguna Cartagena formerly was a cyclic, short hydroperiod open water system. Originally the lagoon had no permanent inlet or outlet to

or from other water bodies until the 1950s, when the Lajas Valley Irrigation System's Principle Drainage Canal was connected through the lagoon, draining westward to Boquerón Bay and the Caribbean Sea. Precipitation is the main hydrologic source for Laguna Cartagena, including water imported from outside the local drainage basin through the irrigation and drainage system (Schaffner 1993, 2007, Sánchez-Colón 2012). At the 11 m contour the surface of the lagoon occupies an area of about 160 ha. The lagoon's surface was at the 10.56 m contour at the time of these observations (F. C. Schaffner pers. comm.). Vegetation in the lagoon is principally cattails (*Typha domingensis*) and floating macrophytes, including water lettuce (*Pistia stratiotes*) and water hyacinth (*Eichhornia crassipes*) (Sánchez-Colón 2012).

### OBSERVATIONS

On 05 February 2012, a large group of Masked Ducks was present at the Laguna Cartagena National Wildlife Refuge in Puerto Rico. Floating low in the water and often diving, birds were at the surface in a floating mat of water lettuce with dispersed, small clumps of water hyacinth. Due to their cryptic nature, obtaining an accurate count appeared prob-



Fig. 1. Panoramic photo (constructed by merging three images) of Masked Ducks (*Nomonyx dominicus*) at Laguna Cartagena National Wildlife Refuge, Lajas, Puerto Rico, on 5 February 2012. The ducks are at the surface in a floating mat of water lettuce (*Pistia stratiotes*) with dispersed, small clumps of water hyacinth (*Eichhornia crassipes*). Photo by Michael J. Morel.

lematic. As a possible solution, coauthor MJM took several photographs (Nikon D300, sigma 120–300 and 150–500 lens with a 2× converter F8.0, ISO 800 1/1250 sec) of the lagoon, which were then assembled into a collage depicting the entire area (Fig. 1). The raw REF files were then converted to TIFF images and magnified from 300% to 400% (Fig 2). Enlargement of the images allowed Masked Ducks that were hidden in the vegetation to be identified and counted. Our total count was 140 Masked Ducks visible above the water’s surface at this location. Given that many birds most likely were submerged when the photos were taken, the actual

number of birds present was probably substantially higher.

Whereas examination of the photos taken by MJM revealed 140 individuals, 2 days later (7 February 2012) Gabriel Lugo-Ortiz (in the ebird sighting note) counted 150 Masked Ducks and speculated that there must have been more than 300 considering the ones that submerged under the floating vegetation.

By 3 March 2012, the number sighted was down to 100 (Adele Monakad, ebird data). On 23 March, numbers had dwindled to 44 (MJM pers. obs.) and by 29 March, only nine individuals remained (Paul

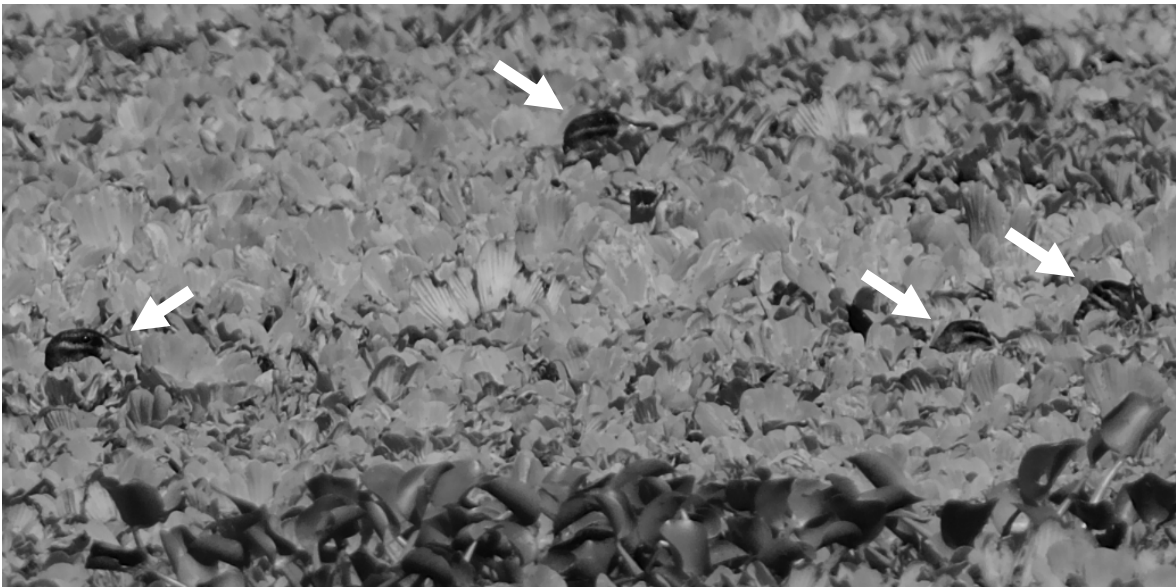


Fig. 2. A small portion of the image above magnified so that Masked Ducks (arrows) hidden in the vegetation can be located. Photo by Michael J. Morel.

van Els, ebird data). Subsequently, the US Fish and Wildlife Service began draining the water from the lagoon and the numbers of Masked Duck continued to decline.

DISCUSSION

The greatest number of Masked Ducks previously published was at Laguna El Jocotal Wildlife Refuge (5,800 ha) in southeastern El Salvador, where in 1976 Ibarra and Rivera (1998) reported a flock of 100 individuals (Eitniear 1999). Previous high numbers of Masked Ducks in the Caribbean included a flock of 80 at Gachet Reservoir, Port Louis, Guadeloupe (6° 26' N, 61°28' W), observed by Anthony Levesque on 18 March 2001 and reported in the Southeastern Caribbean Bird Alert ([www.wow.net/ttfn/rarebird.html](http://www.wow.net/ttfn/rarebird.html)), and 36 from Charca de los Valdez, Puerto Rico (18°29' N, 66°38' W), documented by Sergio Colón-López on 17 March 2002 (Eitniear and Colón-López 2005).

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