

CAPTURING AND MARKING GREATER RHEAS

MÓNICA B. MARTELLA AND JOAQUÍN L. NAVARRO

*Centro de Zoología Aplicada
Universidad Nacional de Córdoba
Casilla de correo 122
5000 Córdoba, Argentina*

Abstract.—In 1989–1990, 14 Greater Rheas (*Rhea americana*) were neck-collared at Córdoba province, Argentina. Birds were stupefied during the night by a light-beam and then caught using ‘boleadoras.’ The marking device was a numbered adjustable cattle-type PVC legband. This capture and banding technique proved to be efficient and comparatively inexpensive, and could be effective both for other ratites and some large mammals with long legs.

CAPTURA Y MARCADO DE ÑANDÚES (*RHEA AMERICANA*)

Sinopsis.—En 1989–1990, 14 Ñandúes (*Rhea americana*) fueron marcados (con collares) en la provincia de Córdoba, Argentina. Las aves fueron deslumbradas durante la noche con un reflector y luego capturadas usando boleadoras. Se empleó como collar una banda plástica ajustable numerada, diseñada originalmente para marcar el ganado en sus patas. Esta técnica de captura y marcado es eficiente y de bajo costo. Podría ser efectiva tanto para otros Ratites, como para algunos mamíferos grandes que posean patas largas.

The Greater Rhea (*Rhea americana*) is one of the most conspicuous birds of the scrublands and grasslands of eastern and central Brazil, the Bolivian Chaco, Paraguay, Uruguay and northern and central Argentina south to Río Negro (Blake 1977).

In the early stages of a study on the ecology and behavior of this species, we required a technique for permanently identifying individuals in the field. We had to deal with two problems: Greater Rheas are difficult to capture because of their speed and size, and the shrubs and tall grass that abound in our area could obstruct the view of leg-bands. In Argentina, the conventional method used to catch these birds for plucking their feathers consists of herding individuals by a trained group of 10–20 horsemen using large drift nets and fences. We tested this technique, but it proved too expensive due to the large equipment and skilled labor that must be involved.

This paper describes an alternative method of capture and a numbered plastic neck-collar used to mark Greater Rheas.

Greater Rheas were successfully captured using traditional ‘boleadoras.’ This device consists of either two or three balls of rounded soapstone lined with raw leather and fastened firmly to a long strap of braided leather. These straps are, in turn, tied together at their other end. We used a ‘boleadoras’ that had two 200-g balls and one (the handle) 220-g ball, attached to 7-mm diameter straps that were 0.97, 0.94 and 1.26 m long, respectively. The ‘boleadoras’ can be either purchased for about \$20 (US), or easily constructed with fishing line weights and nautical rope.

We carried out the captures during the night while the birds lay sleeping on the ground. When a rhea was detected, the vehicle was slowed and

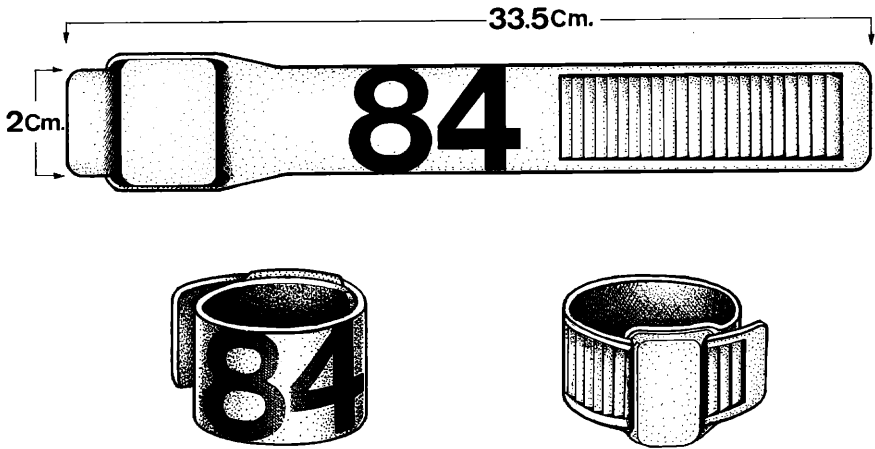


FIGURE 1. Large numbered PVC neck-collar.

its headlights were switched off while the bird was spotlighted with a 200,000-candlepower searchlight. This light-beam generally dazzled the bird, giving the persons time to get out of the car and whirl their 'boleadoras' in the air (to give them speed) while they swiftly approached the rhea to within a distance of 10–15 m without being perceived. When the bird stood up and began to run, the 'boleadoras' were thrown toward its legs. If the throw was accurate, the straps wound around the rhea's legs, and it became entangled and fell down. Immediately, it was immobilized and then marked with a large numbered plastic neck-collar (described below). When released, the rhea ran far away and again adopted the sleeping posture. The time elapsed from detection to release was about 10–15 min. This interval should be minimized because individuals of this species can die due to capture-release stress (M. C. Renteros, pers. comm.).

Capturing should be carried out during winter (non-reproductive season). This enhances the efficiency of the method because Greater Rheas join larger flocks and show less tendency to escape.

We tested this technique on 25–26 Jun. 1989 and 28–29 Jun. 1990 at La Panchita and La Milena ranches in south-western Córdoba province. Three skilled workers were hired and they captured 14 Greater Rheas (seven adults and seven young) in 14 h of fieldwork.

The major advantages of this technique are its low cost (\$1.50–2.50 [US] per bird) and its safety; it does not cause injury to the birds. In addition, none of the Greater Rheas we caught showed evidence of stress at release, or have exhibited any subsequent alteration of behavior. Disadvantages are that it is suitable only in grasslands and its efficiency depends on the skill in the use of 'boleadoras.' This last issue does not limit the use of this technique to Argentina and adjacent areas, however, because anyone could make 'boleadoras' and learn to use them.



FIGURE 2. Greater Rhea showing the numbered neck-collar.

The neck marking device tested by us on rheas was a standard adjustable, cattle-type legband (RAITE^{RT}) manufactured by TECIND S. A. ARGENTINA. Its cost is \$0.50 (US). This collar is made of flexible polyvinyl chloride (PVC) and has a tightener that permits adjusting its diameter from 8.5 to 5.5 cm. Its dimensions are shown in Fig. 1. It is 3.7 mm thick and weighs 58 g, which is equivalent to 0.001 of the rhea's body mass. It is easily applied and, when necessary, can be adjusted or removed with a special palette knife. Identifying numbers are written with a black indelible ink marker on the flat portion of the collar. Several band colors are available (yellow, green, orange, light blue, black and white); however, we used only black digits on yellow bands because this color combination has been recommended by other authors (Hart 1987, Ogilvie 1972). With 8 × 25 binoculars, the collars are conspicuous in the field (Fig. 2) at distances up to 300 m. The numbers, however, are difficult to read at distances of more than 100 m without a telescope.

The collars have been worn by two adult males kept in a 0.5-ha enclosure for 2 yr and by wild birds for more than 1 yr. During this time, none of the marked rheas exhibited either physical damage or abnormalities in behavior. One captive male was observed incubating a clutch and later seen foraging with its chicks. One young bird lost an inadequately tightened collar when it slipped over its head. The collars on all other birds remained in position without indications of wear.

The technique of capture described in this paper could be used on other large animals with long legs such as other Ratites and some mammals (e.g., camelids). Although neck-collars have been used extensively for marking waterfowl, reports on the success of these devices have not all been favorable (Marion and Shamis 1977). Our results, however, indicate neck-collars may be appropriate for marking those large species that commonly graze in tall grass, where their legs are not visible.

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