Earlier reports of belly-soaking in Common Terns involved somewhat lower air temperatures (24°–26°C, Mes et al. 1978; 30°C, Grant 1981). The birds observed by Mes et al. (1978) resembled mine in stopping feeding at these high temperatures. In Purple Martins (*Progne subis*), Jackson and Schardien (N. Am. Bird Bander 6:12–13, 1981) similarly found that belly-soaking appeared to be effective in protecting small chicks, but not large chicks, from heat stress. Other references to belly-soaking in Charadriiformes, including terns, were summarized by Grant (1981) and Schardien and Jackson (Auk 96: 604–606, 1981).

I thank F. S. Sterrett, M. C. Sterrett, and M. Y. Stoeckle for help in the field, and G. Faddoul for conducting the autopsies.—IAN C. T. NISBET, *Massachusetts Audubon Society, Lincoln, Massachusetts 01773.* (Present address: *6208 Lakeview Drive, Falls Church, Virginia 22041.*) Received 1 May 1982; accepted 13 Sept. 1982.

Automatic Recording of Nest Visits by Burrow-Nesting Birds.—During a study of the breeding biology of burrow-nesting petrels (Procellariidae) at the Prince Edward islands (46°54′S, 37°45′E) data were required on the frequency and timing of nest visits by adult birds. The nocturnal habits of petrels and their irregular feeding of nestlings dictated the use of an automatic recording system capable of registering the passage of a bird both in and out of the burrow. The system had to be inexpensive, but robust enough

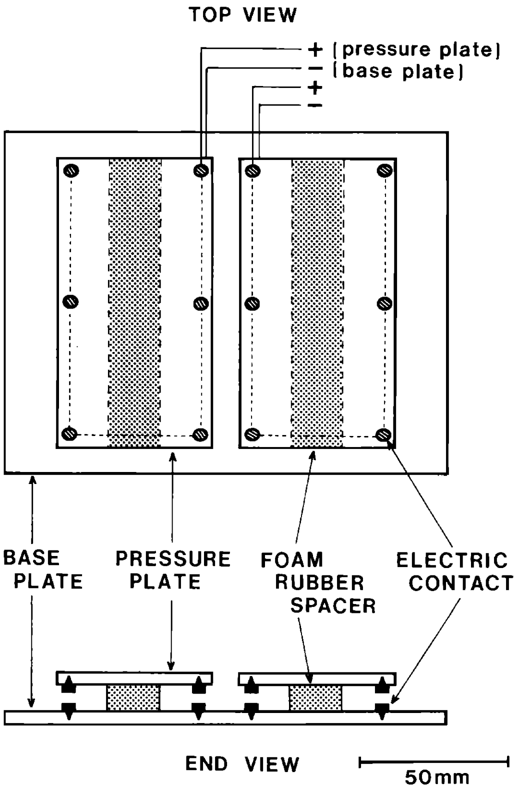

FIGURE 1. Design of a sensor for monitoring the nest visits of burrow-nesting birds.

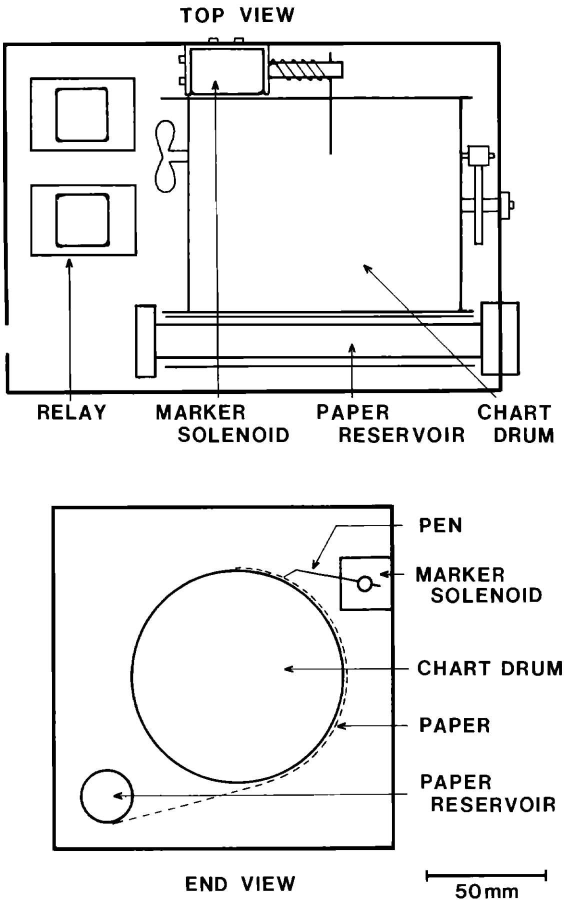

FIGURE 2. Design of a chart-recorder for recording the nest visits of burrow-nesting birds.

to withstand the extreme Subantarctic climate, requirements not met by locally available commercial systems. I used a sensor, placed inside the nest-tunnel, linked to a chart recorder outside, and powered by a rechargeable battery.

The sensing device (Fig. 1), made of plastic, included 2 pressure plates mounted over a base plate. Six electrical contacts made from self-tapping screws were positioned around the edge of each pressure plate and kept apart from the matching contacts on the base plate by a foam-rubber spacer. If a bird stood on almost any part of the sensor, it tilted the pressure plate on the foam rubber and closed one or more of the contacts.

The recorder (Fig. 2) was mounted in a weatherproof box and consisted of a clockwork chart-drum, revolving once every 24 h at a speed of 12mm/h. The chart-drum chosen was a type used by meteorological stations for recording daily pressure changes. Pressure sensitive chart paper around the drum was fed from a paper reservoir, made from a pipe, and allowed 3–4 days of continuous running. The sensing device in the tunnel was connected via 2 relays to a marker-solenoid (Fig. 3) and the whole system was

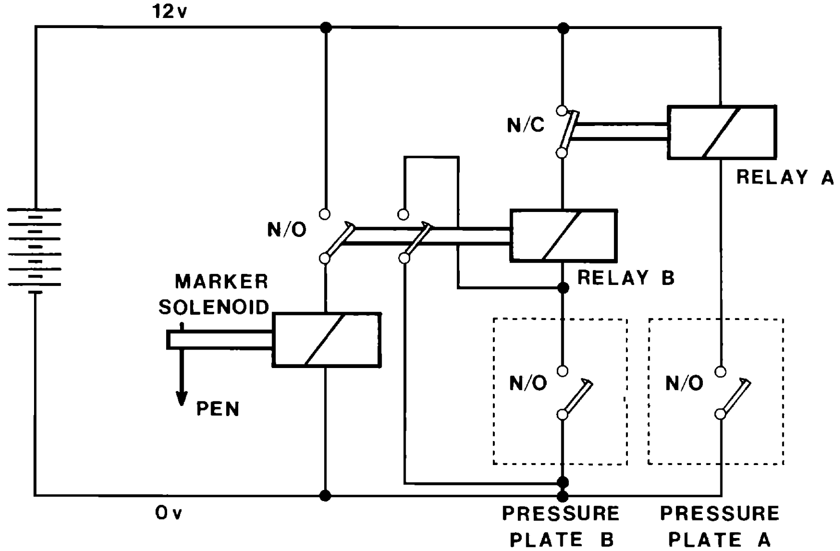

FIGURE 3. Circuit diagram of apparatus for monitoring the nest visits of burrow-nesting birds (N/O = switches normally open; N/C = switches normally closed).

powered by a 12-volt battery which lasted about 10 days without recharge. A dissecting needle attached to the marker-solenoid was used as a pen on the pressure sensitive paper. A light spring kept the pen depressed so that it made a continuous trace across the paper on the drum. As a bird entered the burrow and walked over both pressure plates, the pen made a mark on the chart and only returned to its original position once the sensor had been reactivated as the bird left the nest.

This automatic monitoring system proved reliable and occasional cleaning of the contacts on the sensor was the only maintenance required. The clockwork chart-drum was very satisfactory and kept the total cost of the recorder and sensor to under $200 (1982 prices). The system obviously has wider application than just tunnel-nesting birds and could be used for recording the passage of any animal which uses a regular pathway.

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A Radio-Control Method for Trapping Birds in Nest Boxes.—Perhaps the most exasperating part of any study of box-nesting species is capturing a specific individual for marking. We found conventional methods unsatisfactory in trapping specific individual Starlings (*Sturnus vulgaris*) and Tree Swallows (*Iridoprocne bicolor*). Here we describe a radio-controlled trap designed in response to this problem.

This design is a modification of trap designs developed by Kibler (EBBA News 31: 167–173, 1968) and Dhondt and VanOutryve (Bird-Banding 42:119–120, 1971). A hinged door is attached to a modified nest-box lid (see Fig. 1). The door is held against the lid by a servomechanism. When the servomechanism is activated by a radio signal, it moves downward, releasing the door, which swings into place blocking the entrance. The captured bird is removed by blocking the hole from the exterior and removing the lid. The