

minor feather wear. It was photographed, measured (weight, 10.6 g; flattened wing chord, 80 mm; tarsus, 17.1 mm; culmen length, nares to tip, 8.2 mm) and released with British Museum band BJ80002 on the right leg and a red celluloid band on the left leg. These data and five color slides have been deposited in the American Museum of Natural History, New York.

The Blackpoll Warbler is well known for its long migration and tendency to wander (L. Griscom and A. Sprunt, The warblers of North America, Devon-Adair, New York, 1957). The individual we caught was presumably lost, perhaps during spring migration.

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## A SECOND BREEDING RECORD FOR THE GREY-HOODED GULL (*LARUS CIRROCEPHALUS*) ON THE COAST OF PERU

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AND  
NATASHA ATKINS

The Grey-hooded Gull (*Larus cirrocephalus*) is known to breed at only one locality west of the Andes, a small coastal pond named Laguna Chica (14°11'S, 76°17'W) in the Departamento de Ica, Peru (Tovar and Ashmole, *Condor* 72:119, 1970). We report here a second and larger colony, 56 km north of Laguna Chica, in Pampa Agua Santa, Departamento de Ica (13°40'S, 76°10'W).

We visited Laguna Chica on 31 May and 17 June 1978 and found seven occupied nests on each visit. It seemed unlikely that the 50–100 Grey-hooded Gulls in the Pisco-Paracas area of Ica all bred at Laguna Chica, and we looked for additional colonies during the course of other fieldwork. On 19 July 1978, while exploring the backroads of the town of San Clemente, just north of the Pisco River, we came across a colony in a small (approximately 8 ha) irrigation reservoir at

the boundary of Agua Santa marsh and the surrounding desert. From an adjacent hillside we counted 26 adults on apparent nest structures and a total of 76 when we flushed the colony. We saw four large, unfledged young. On 22 July we returned and counted 34 adults on nest sites and 86 when flushed. Nine large young were seen away from nests.

Like Laguna Chica, this unnamed pond is shallow (.3–.5 m) and small. The nests were stick platforms in the water or herbaceous material on man-made dikes that intersect the pond. Nests were 3 to 30 m apart. Cattle and human tracks were visible on the bottom of the pond, suggesting that quicksand is not as prevalent here as in other parts of the marsh. Nevertheless, the water's depth may be sufficient to discourage predation by foxes (*Dusicyon sechurae*). The discovery of this colony suggests that additional colonies may be found in rather small ponds.

We would like to thank Felipe Benavides for making the facilities of the Instituto Paracas available to us. Permission of the Peruvian Ministerio de Agricultura to work in the Reserva Nacional is gratefully acknowledged.

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## A SEVEN-EGG CLUTCH FOR THE COOPER'S HAWK

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Cooper's Hawks (*Accipiter cooperii*) normally lay four to five eggs. Six-egg clutches occasionally occur (Bent, Life histories of North American birds of prey, Part 1, Bull. U.S. Natl. Mus. 167:115, 1937). Of 266 clutches at the Western Foundation of Verte-

brate Zoology, Los Angeles, California, only seven contain six eggs; none contain more (Lloyd F. Kiff, pers. comm.).

On 3 June 1976 we climbed to a Cooper's Hawk nest which proved to contain seven eggs, a probable record for this species. The nest was about 12 m up in a sycamore tree (*Platanus wrightii*) along the wash bed of an ephemeral stream on the east slopes of the Baboquivari Mountains, Pima Co., Arizona.

This exceptionally large clutch may have been produced by more than one female, as independently suggested by Heinz K. Meng (pers. comm.) and Noel F. R. Snyder (pers. comm.), both of whom have extensive field experience with Cooper's Hawks. However, during two visits to the nest (14 May and 3

June), we saw but one female (in adult plumage) present and defending. In addition, we noted no obvious size or color differences in the eggs (at the nest or in photographs) to suggest that two females were responsible for the clutch. Unfortunately, the eggs were not measured. An alternate hypothesis, implied by Snyder and Wiley (Ornithol. Monogr., No. 20, 1976), is that the unusual clutch could have been produced by an extremely well-fed female who was also genetically disposed to lay large clutches. On our

final visit (9 July), no adults were present and we found the nest broken up.

We thank Walter R. Spofford, Noel F. R. Snyder, and L. R. Wolfe for their comments on the manuscript and Lloyd F. Kiff for searching the records at the Western Foundation of Vertebrate Zoology.

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### SUGGESTIONS FOR PREPARING AUDIOSPECTROGRAMS FOR PUBLICATION

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Audiospectrograms ("sonagrams") are subject to the same general rules for publication as other illustrative material, but they do present a few special problems. My intent here is to present some procedures, and to discuss the special problems.

First, decide to what journal the paper will be sent. In *The Condor*, the type bed is 14.7 × 23 cm. This is the maximum permissible space per page for an illustration, including the legend. The page has two columns, each 7.1 cm wide. The illustrations may be reduced to the width of one column, or, if this reduces them too much, they may occupy the double-column space. It is important to plan which reduction will be necessary, so that appropriately sized lettering can be used in the original artwork: when reduced, letters and numbers should be approximately the same size as capital letters in the text.

Next, there is a choice of modes of presentation. If the space is available, and the spectrogram is sharp, clear, and relatively short, it is preferable to use the actual sonagram for the figure. Intensity of sound is indicated by the darkness of the marking, and the details of sound are more complete and more exact on the actual sonagram. If sound intensity differences are important, and need to be shown, the illustration should be printed in halftone (e.g., Martin, *Condor* 79:209-221, 1977; Morton and Shalter, *Condor* 79:222-227, 1977). Often, however, the intensity is not important and the original artwork, including

the sonagram, can be photographed with high contrast film and paper to produce a strictly black-and-white print (e.g., Thompson, Fig. 3, *Condor* 78:200, 1976). This procedure sometimes results in a loss of structural detail in the printed figure, as seems to be the case in Figure 5 of Orians et al. (*Condor* 79:250-256, 1977). Nevertheless, depending on the characteristics of the sonagram, this process can be useful, and is much less expensive to print than the halftone. With this method, the markings of extraneous sounds may be opaqued out with paint or white correction fluid.

[In photographing any artwork, care should be taken so that the negatives and prints are perfectly sharp. Overlaying sonagrams with a glass plate during copying will prevent them from curling and ensure exact focus overall. Prints from high-contrast negatives should be exposed just enough so that the markings and lettering are black, not grey. These will become blurred if overexposed and consequently will block up when reduced.—Ed.]

If the illustration must be greatly reduced, many details will be lost. Therefore, for long sonagrams or groups of sonagrams it is often preferable to trace them onto tracing paper, and then transfer the tracing to drawing paper. An alternative is to trace the spectrograms onto vellum graph paper; the blue graph lines do not register when photographed on high contrast film, so the transfer to drawing paper can be omitted. The sharp contrast of the inked sound figures with the white background allows for considerable reduction with less loss of detail (e.g., Thompson 1976: 195-207). There is a trade-off of information in such illustrations, of course, because the intensity of sound, as indicated by the darkness of the marks, is lost. For complex sounds