Scott, W. B., and **M. G. Scott.** 1988. Atlantic fishes of Canada. Canadian Bulletin of Fisheries and Aquatic Sciences 219. xxx + 731 pages.

Yano, K. 1992. Comments on the reproductive mode of the false cat shark, *Pseudotriakis microdon*. Copeia 1992: 460–468.

Yano, K., and **J. A. Musick.** 1992. Comparison of morphometrics of Atlantic and Pacific specimens of the false catshark, *Pseudotriakis microdon*, with notes on stomach contents. Copeia 1992: 877–886.

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Six-egg clutches of the Mountain Plover, *Charadrius montanus*

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Three six-egg clutches of the Mountain Plover (*Charadrius montanus*) represent the largest clutch size ever reported for this declining Great Plains shorebird. Clutch size in this species is normally three eggs, and six-egg clutches probably represent the laying of a second clutch in the nest by the same female.

Key Words: Mountain Plover, *Charadrius montanus*, clutch size, Montana.

Mountain Plovers (*Charadrius montanus*) are a declining shorebird of the western Great Plains breeding from southeastern Alberta south to Texas (Knopf 1996a). Nearly all clutches of this species contain three eggs (Graul 1975; Knopf 1996b). Four-egg clutches have been reported on six occasions (Graul 1975; Hamas 1985; Knopf 1996b). Herein, we report three incidences of six-egg clutches in the Mountain Plover.

On 2 June 1997, we found a Mountain Plover nest containing six eggs in southern Phillips County, Montana (47°38′N, 108°01′W; cover). The nest was on a small (4 ha) Black-tailed Prairie Dog (*Cynomys ludovicianus*) colony on Bureau of Land Management lands, just north of the Charles M. Russell National Wildlife Refuge boundary. All of the eggs were very similar in size, shape, colouration and marking patterns, suggesting that they were laid by a single female. Mountain Plovers lay eggs that vary widely in these traits among females, with eggs from different females almost always being distinctive (personal observation).

Floatation of the six eggs revealed that all eggs were at least three weeks old. The adult was trapped and colour-banded. On 5 June, the colour-banded adult was incubating all six eggs. The eggs were floated again and determined to be within a few days of hatching. On 12 June, the nest was empty. Lack of disturbance to the nest and presence of minute egg-shell fragments in the nest cup (Mabee 1997) indicated it hatched successfully, probably around 10 June. Although we cannot be sure, it is likely that all six eggs hatched because unhatched eggs in other Mountain Plover nests often remain untouched for weeks (personal observation).

On 24 June 1998, we found another six-egg clutch at Fort Belknap Indian Reservation in Blaine County, Montana (48°20′N, 108°28′W). All of the eggs were very similar in size, shape, colouration and marking patterns, suggesting that they were laid by a single female. Floatation of the six eggs revealed that they were nearly four weeks old and within 1-2 of days of hatching. The adult was trapped and colour-banded. We did not return to the nest-site until 14 July, at which time the nest was empty. Using eggshell evidence (Mabee 1997), we inferred that the nest hatched successfully, although we never saw the adult and young again.

We recently learned of a third six-egg clutch of the Mountain Plover. Kari Bartosiak photographed that clutch on 21 May 1992 on the Thunder Basin National Grassland, approximately 30 km north of Bill, Converse County, Wyoming (43° 12′ N 105° 18′ W). The photograph of that clutch also showed six eggs of similar size, shape, colouration, and markings. The ultimate fate of that nest was not certain, but five eggs were still present and being incubated on 10 June 1992.

Clutch size in Mountain Plovers is highly consistent. Ninety-one percent of 108 nests on the Pawnee National Grassland in northeastern Colorado (Knopf 1996b) and 89% of 371 nests in Phillips County, Montana (SJD) contained three eggs. Incomplete clutches and partial predation of the nests may have biased these figures downward. Four-egg clutches are rare in Mountain Plovers. We have observed two four-egg clutches, one each on the Pawnee National Grassland and in Phillips County. The latter nest contained a runt egg that failed to hatch (SJD). Of two additional four-egg clutches on the Pawnee, only

one contained a runt egg that failed to hatch (T. Sordahl, personal communication). We speculate that the six-egg clutches represent two separate clutches of three eggs each that were deposited in the same nest. Some female Mountain Plovers are known to lay two clutches (Graul 1973), one incubated by each member of the pair. We speculate that at each six-egg clutch site, a single female was responsible for laying two clutches in the same nest. We thank Tim W. Byer, District Wildlife Biologist for the Thunder Basin National Grassland, U.S. Forest Service, for providing a photograph and field notes regarding the Wyoming clutch.

Literature Cited

Graul, W. D. 1973. Adaptive aspects of the Mountain Plover social system. Living Bird 12: 69–94.

Graul, W. D. 1975. Breeding biology of the mountain plover. Wilson Bulletin 87: 6–31.

Hamas, M. J. 1985. A four-egg clutch of the mountain plover. Wilson Bulletin 97: 388–389.

Knopf, F. L. 1996a. Prairie legacies – birds. *In* Prairie Conservation: preserving North America's most endangered ecosystem. *Edited by* F. B. Samson and F. L. Knopf. Island Press, Covelo, California.

Knopf, F. L. 1996b. Mountain Plover (*Charadrius montanus*). *In* The Birds of North America, Number 211. *Edited by* A. Poole and F. Gill. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D. C.

Mabee, T. J. 1997. Using eggshell evidence to determine nest fate of shorebirds. Wilson Bulletin 109: 307–313.

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Unusually High Yellow-billed Cuckoo, *Coccyzus americanus*, Nests

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Yellow-billed Cuckoos nest much higher than documented, even in forest tree canopies. Previous descriptions of nest sites do not attribute nest heights greater than 14 m to this species. I report Yellow-billed Cuckoo nests in Arkansas at heights as great as 27 m. Location of high nests may be assisted by observation of behavioral cues when nest searching.

Key Words: Yellow-billed Cuckoo, *Coccyzus americanus*, nests, height, Arkansas.

The Yellow-billed Cuckoo (*Coccyzus americanus*) is described as nesting in small to medium-sized trees and vine tangles (Bent 1940; Hamel 1992; Terres 1982). This species is commonly perceived as a midstory-nester. I report the greatest observed range in nesting height for this species at a single locale, and show it capable of nesting much higher than previously documented.

Data were collected at White River National Wildlife Refuge (WRNWR) April–August, 1994–1997. Located in eastern Arkansas and containing 66 000 ha of bottomland hardwood forest, WRNWR is the largest forested wetland tract north of Louisiana. Nuttall Oak (*Quercus nuttallii*), Overcup Oak (*Quercus lyrata*), and Sugarberry (*Celtis laevigata*) are the predominant tree species.

Yellow-billed Cuckoo nests were located on six 50-ha study plots. The approximate latitude and longitude bounds for the six plots were: North, 34°15′; South, 34°13′16″; East, 91°3′26″; West, 91°7′30″. The plots at WRNWR were searched for Yellow-billed Cuckoo nests from the time of their arrival (April–May) until late July. Locations were recorded for nests located while still active, and for terminated nesting attempts that still had Yellow-billed Cuckoo egg shell fragments in or beneath the nest. Nests found while still active are distinguished below. From late July–August of each year, nest heights were collected for all nests located during the breeding season. Nest heights were measured with a Suunto clinometer.

In 1994, mean nest height was 4.9 m (n = 34, 2SE = 1.40, range = 2.8–9.4); in 1995, it was 5.5 m (n = 45, 2SE = 1.20, range = 2.7–13.2); in 1996, it was 5.6 m (n = 75, 2SE = 0.80, range = 1.5–-23.4); and in 1997, mean nest height was 8.2 m (n = 117, 2SE=0.80, range=1.4-27.0). Of these, no nests >14 m high were located in 1994 or 1995, 3 were located in 1996 (heights 19.2, 19.6, and 23.4 m), and 11 in 1997 (heights 14.3, 16, 16.2, 16.4, 17.4 (2), 18.8, 19, 22, 25, and 27 m). Of the three high nests located in 1996, two were located while active. Of the 10 high

*See Documents Cited section.

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