



## American Bittern Eggs in American Coot Nests in British Columbia

*R. Wayne Campbell*

*2511 Kilgary Place, Victoria, British Columbia, Canada V8N 1J6*

Brood parasitism by marsh-nesting birds in North America, which involves waterfowl, coots, rails, and gallinules, is fairly well known (e.g., Weller 1959, Joyner 1976, Bellrose 1980, Arnold 1987, Lyon 1993, Brisbin and Mowbray 2002). This reproductive strategy may be interspecific, which involves laying eggs in nests of other species, or conspecific, where eggs are laid in other nests of the same species. Far less is known about the occurrence and frequency of parasitism for other overwater nesting species such as grebes, bitterns, and terns.

In summer 2011, I found two instances of interspecific parasitism of American Coot (*Fulica americana*) nests by American Bittern (*Botaurus lentiginosus*) in south-central British Columbia. On 12 June, an American Coot nest was found in a dense stand of bulrushes (*Scirpus* spp.) interspersed with cattails (*Typha latifolia*) in Phillips Lake. This site is located about nine kilometres south of the east end of Shuswap Lake. The coot nest contained four intact eggs plus eggshells from a hatched chick as well as two American Bittern eggs (Figure 1). The remaining



**Figure 1.** American Coot nest with two American Bittern eggs (top and centre) at Phillips Lake, BC. *Photo by R. Wayne Campbell, 12 June 2010. BC Photo 3740 (see Campbell and Stirling 1971).*

coot eggs were ready to hatch, whereas the incubation stage of the bittern eggs, tested by water floatation (see Campbell et al. 2001), were quite fresh, suggesting the eggs had been laid during the past few days. The coot nest was built mostly of cattails, about 23 cm (9 in) high and 28 cm (11 in) across, and rimmed with a few stems of dead bulrushes (Figure 1).

The second coot nest was located on 14 June in a large, bulrush marsh in Chapperon Lake on the Douglas Lake Ranch. It contained two coot eggs and a one of a bittern (Figure 2). The nest was built entirely of dead bulrush stems, about 25 cm high and 33 cm in diameter. The nest appeared abandoned as the three eggs were cold and no adults of either species were heard or seen in the immediate vicinity of the nest. A family of coots, however, with four young about four days old were swimming along the lakeshore about 30 m away. The coot eggs floated high suggesting they were added, whereas the bittern egg sank indicating that incubation had not yet begun.

Nesting habitat for wetland birds is affected by the amount of runoff from snowpack on surrounding mountains and the amount of rainfall during spring and early summer. These conditions alter water levels and restrict available habitat for nest sites (Fletcher and Koford 2004). The record-breaking weather in British Columbia in 2011 may have contributed to egg-dumping by American Bitterns. While temperatures for the province were at least 3.5° C lower than normal, and the prolonged cool and wet weather during the spring and summer delayed the nesting season for some species by up to three weeks, it was the unusually high water levels that impacted wetland- nesting birds (see Campbell et al. in press). Water levels at Phillips and Chapperon lakes were at least 48-61 cm above normal levels and many nests of overwater nesting species were flooded (pers. obs.). Many American Coot nests, however, that were not well anchored to emergent vegetation, floated with rising water.



**Figure 2.** American Coot nest with a single American Bittern egg (top) at Chapperon Lake, BC. *Photo by R. Wayne Campbell, 14 June 2011. BC Photo 3741.*

In British Columbia, 61% of American Bittern nests with eggs (n = 28) were reported during the last half of May and first half of June (Campbell et al. 1990). In 2011, water levels may have prevented suitable emergent plant cover and nest attachment for bitterns as the upper parts of reeds and cattails did not provide support, cover, or protection. Consequently, the species' nesting season may have progressed too far into an abnormal year to resume normal nesting activities.

Redhead (*Aythya americana*) has been reported depositing eggs in an American Bittern nest in Iowa (Low 1940) and Alberta (Sealy 1965) but the records documented here for British Columbia are the first of American Bittern laying in nests of American Coot or any other species (Gibbs et al. 1992). Of interest is the recent report by Peer (2006) who found two instances of American Coot parasitizing nests of Least Bittern (*Ixobrychus exilis*) in Iowa.

As nest surveys for waterbirds are continued and reported, interspecific brood parasitism by American Bittern may be found not to be as rare an event as first thought, especially during periods of abnormal weather. †

### **Acknowledgements**

I thank Joe Gardner, manager of Douglas Lake Ranch, for permission to access Chapperon Lake through private land. Spencer G. Sealy reviewed this note.

### **Literature Cited**

- Arnold, T.W.** 1987. Conspecific egg discrimination in American Coots. *Condor* 89:675-676.
- Bellrose, F.C.** 1980. Ducks, geese & swans of North America. Stackpole Books, Harrisburgh, PA. 540 pp.
- Brisbin, I.L. and T.B. Mowbray.** 2002. American Coot (*Fulica americana*) and Hawaiian Coot (*Fulica alai*). In *The birds of North America*, No. 697 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 44 pp.
- Campbell, R.W. and M.I. Preston.** 2001. British Columbia nest record scheme 46<sup>th</sup> annual report – 2000 nesting season. Wild Bird Trust of British Columbia Wildlife Report No. 7, Victoria, BC. 26 pp.
- Campbell, R.W. and D. Stirling.** 1971. A photoduplicate file for British Columbia vertebrate records. *Syesis* 4(1/2):217-222.
- Campbell, R.W., L.M. Van Damme, M. Nyhof, and P. Huet.** In press. British Columbia nest records scheme 56<sup>th</sup> annual report – 2011 nesting season. Biodiversity Centre for Wildlife Studies Report No. 16, Victoria, BC.
- Fletcher, R.J. and R.R. Koford.** 2004. Consequence of rainfall variation for breeding wetland blackbirds. *Canadian Journal of Zoology* 82:1316-1325.
- Gibbs, J.P., S. Melvin, and F.A. Reid.** 1992. American Bittern. In *The birds of North America*, No. 18 (A. Poole, P. Stettenheim, and F. Gill, eds.). The Academy of Natural Sciences; Washington, DC. The American Ornithologists' Union. 12 pp.
- Low, J.B.** 1940. Production of the Redhead (*Nyroca americana*) in Iowa. *Wilson Bulletin* 52:153-164.
- Lyon, B.E.** 1993. The ecology and evolution of conspecific brood parasitism in American Coots (*Fulica americana*). *Animal Behaviour* 46:911-928.
- Peer, B.D.** 2006. American Coot parasitism on Least Bitterns. *Wilson Journal of Ornithology* 118:415-418.
- Sealy, S.G.** 1965. Redhead parasitizing the nest of the American Bittern. *Blue Jay* 23:172-173.
- Weller, M.W.** 1959. Parasitic egg laying in the Redhead (*Aythya americana*) and other North American Anatidae. *Ecological Monographs* 29:333-365.