

General Field Notes

General Field Notes briefly report such items as rare sightings, unusual behaviors, significant nesting records, or summaries of such items.

First, second, or third sightings of species in either state must be submitted to the appropriate Bird Records Committee prior to publication in *The Chat*.

Possible Case of Weather-mediated Mortality of Cave Swallow (*Petrochelidon fulva pallida*) Wintering in South Carolina

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The Cave Swallow (*Petrochelidon fulva*) has become a regular fall and early-winter vagrant to the Atlantic coast from South Carolina to Rhode Island during the past two decades (Curry and McLaughlin 2000, McNair and Post 2001, Brinkley 2002, Post 2008). The increase in sightings is probably linked to the recent colonization of southern Florida by the Caribbean race (*Petrochelidon f. fulva*) and especially to the rapid expansion of the breeding range of the southwestern race (*Petrochelidon f. pallida*) in Texas (West 1995). The occurrence of both subspecies in the eastern United States has been confirmed by specimens (McNair and Post 1999, Curry and McLaughlin 2000, Lee et al. 2001, McNair and Post 2001, Post 2008). Five specimens of *Petrochelidon f. pallida* have been salvaged or collected in the Carolinas. McNair and Post (1999) salvaged an emaciated individual at Folly Beach, Charleston County, South Carolina on 31 October 1993. An adult male was salvaged at Ft. Macon, Carteret County, North Carolina on 2 December 1999 (Lee et al. 2001). Post (2008) reported three additional specimens from South Carolina, an emaciated juvenile found dead on 18 December 2004 at McClellanville, Charleston County, and two juveniles collected on 20 February 2006 near North Litchfield Beach, Georgetown County. The latter juveniles had heavy fat deposits and were actively molting, indicating that the food supply was sufficient. The occurrence of a flock of up to 50 Cave Swallows in Georgetown County from November 2005 through February 2006 (Post 2008) may herald an incipient wintering population in coastal South Carolina. Here I report an observation that

suggests that wintering Cave Swallows along the Atlantic coast may experience strong natural selection from freezing weather and high winds.

On 2 January 2008 (1650 hr), about 30 minutes before sunset, a swallow abruptly appeared at the western end of the parking lot facing the fishing pier at Myrtle Beach State Park, Horry County. I was surprised to see a swallow so late in the day given the current temperature (1.7 °C) and biting winds (22 km/hr with gusts to 39 km/hr). The swallow made low tight circles over a brackish ditch draining onto the beach and darted briefly into a culvert, permitting a brief glimpse of its broad wings, square tail and contrasting rump. However, I was unable to get a good look at the swallow's head pattern in the fading light. After a few more passes over the narrow ditch, the swallow circled high over the adjacent live oaks and then flew southwest over the frontage road paralleling the beach, finally disappearing from sight.

Thinking that the swallow may have flown to a roost site, I began checking buildings and pavilions along the flight path. I soon (1710 hr) flushed what was presumably the same swallow from a semi-enclosed picnic pavilion (33° 38.855' N; 78° 55.873' W), about 220 m from the initial sighting. The swallow returned to the pavilion in about three minutes and perched high on a diagonal cross beam of an interior wall. By that time, it was nearly dark. I took a series of flash digital photographs of the perched swallow (Fig. 1, upper panel) with a Canon Powershot A570 camera (7.1 megapixels) and then quietly withdrew.

Winds were westerly for 36 hours preceding the sighting on 2 January (maximum wind during the period, 29 km/hr with gusts to 53 km/hr). Temperature reached a low of -4.4 °C that night. When I returned at 0755 hr on the morning of 3 January 2008, the visibly shivering swallow was perched in the same position on the cross beam with its head tucked into its back feathers (Fig. 1, lower panel). The swallow departed the pavilion sometime before I returned to check on it at 1000 hr. I suspect the swallow succumbed to hypothermia and starvation soon after leaving the roost because it did not return to the pavilion or any other open-sided structure in the park on three subsequent evenings (3–5 January 2008). Daytime temperatures on 3 January never exceeded 2 °C and the low temperature during the night of 3–4 January was -8.3 °C. The combination of low temperature and high winds scrubbed the air of flying insects on 2–3 January—I observed none during 12 hours of field observation on those days. A close examination of the roost site revealed a single fecal splat composed almost exclusively of white urates, indicating that the swallow had consumed few or no insects during the hours before roosting on 2 January. Although these isolated observations should not be accorded undue significance, they do raise the possibility that mortality rates of wintering Cave Swallows may be high during prolonged periods of high winds and freezing nights.



Figure 1. Cave Swallow (*Petrochelidon f. pallida*) at roost in Myrtle Beach State Park, Horry County, South Carolina, on 2–3 January 2008.

I compared the photographs of the Myrtle Beach swallow with specimen series of Cave Swallow and Cliff Swallow (*Petrochelidon pyrrhonota*) in the National Museum of Natural History, Smithsonian Institution. The swallow, which differed from all subspecies of the Cliff Swallow in having a chestnut frontal patch and buffy auriculars and throat, was indistinguishable from typical individuals of the southwestern subspecies of the Cave Swallow, *P. f. pallida*. In particular, the flanks were softly streaked with gray as in *P. f. pallida*, rather than with tawny or cinnamoneous markings typical of the Caribbean race, *P. f. fulva*. The narrow whitish (rather than buffy) margins of the tertials suggest the swallow was an adult in basic plumage (Pyle 1997).

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Literature Cited

- Brinkley, E. S. 2002. Cave Swallows (*Petrochelidon fulva*) on the eastern shore of Virginia. *Raven* 73:55–60.
- Curry, B., and K. A. McLaughlin. 2000. The November 1999 Cave Swallow invasion in Ontario and northeastern North America. *Ontario Birds* 18:13–26.
- Lee, D. S., J. A. Gerwin, and R. B. Browning. 2001. Specimen documentation of unusual, and previously unrecorded birds from North Carolina. *Journal of the Elisha Mitchell Scientific Society* 117:123–127.
- McNair, D. B., and W. Post. 1999. First specimen record of the Cave Swallow *Petrochelidon fulva pelodroma* in eastern North America. *Chat* 63:30–32.
- McNair, D. B., and W. Post. 2001. Review of the occurrence of vagrant Cave Swallows in the United States and Canada. *Journal of Field Ornithology* 72:485–503.
- Post, W. 2008. Cave Swallows wintering on the coasts of Georgia and the Carolinas: a prelude to breeding? *Florida Field Naturalist* 36:1–4.
- Pyle, P. 1997. Identification guide to North American birds. Part 1. Columbidae to Ploceidae. Slate Creek Press, Bolinas, California.
- West, S. 1995. Cave Swallow (*Hirundo fulva*). No. 141. *in* A. Poole and F. Gill, editors. *The Birds of North America*. The Academy of Natural Sciences, Philadelphia, and the American Ornithologists' Union, Washington, D.C.