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Mallard feeding on kokanee salmon eggs, Taylor Creek, California

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Mallards (*Anas platyrhynchos*) are an abundant breeding duck throughout California (Kozlik 1974) and feed widely on both animal and plant materials (Martin et al. 1961, Swanson et al. 1985, Bellrose 1980, Cederholm et al. 1989). Munro (1923) appears to be the first published record of mallards consuming salmon eggs. In Alaska, Gleason (2007) reported mallards eating salmon carcasses, as well as a personal communication that the use of salmon eggs is a common foraging strategy of mallards. Gleason (2007) also included additional second-hand reports that anecdotally suggest that salmon form an important food source for mallards. Other reports (Munroe 1943, Willson and Halupka 1995), combined with observations from Canada (J. S. Gleason, U.S. Fish and Wildlife Service, personal communication June 2014) and California (E. G. Hunt, CDFW retired, personal communication June 2014) suggest that this foraging strategy is more common than is indicated in the literature. In this note we call attention to the personal observations or personal communications included in previously published papers (Munroe 1923, Gleason 2007). Further, we describe an additional observation of a male mallard consuming eggs of kokanee salmon (*Oncorhynchus nerka*) in a tributary to Lake Tahoe, California. Kokanee were introduced to Lake Tahoe in 1944 when fry were accidentally released (Cordone et al. 1971). Kokanee were planted annually thereafter in most of the major tributaries to the lake, and Taylor Creek, El Dorado Co., California became the major spawning area (Cordone et al. 1971).

At 1208 on 6 October 2013 authors Dieter and Atkinson observed a male mallard at Taylor Creek (38° 56’ 6” N, 120° 3’ 25” W) fly into the creek and actively begin stirring up kokanee redds with his feet and consuming the eggs as they floated to the surface (Figure 1). This behavior continued for approximately 20 minutes while dozens of fish were spawning, and within 3 m of many other people observing the annual kokanee run.

Figure 1.—Male mallard (*Anas platyrhynchos*) stirring kokanee (*Oncorhynchus nerka*) redds with his feet. The mallard repeatedly stirred the bottom and fed on the kokanee eggs as they floated up from the substrate. Taylor Creek, El Dorado County, California, 6 October 2013. Photograph by L. D. Dieter.

The kokanee seemed habituated to this activity, staying within the area disturbed by the mallard; one male kokanee was observed proximate to (i.e., <20 cm) the duck's feet without apparent alarm. On each dabble, the mallard ingested several kokanee eggs. The stirring and dabbling behavior continued as the duck moved upstream through the spawning kokanee. The duck, although habituated to people, appeared to be a normal wild mallard (Figure 2).

Figure 2.—The mallard observed stirring kokanee redds with his feet appeared to be a normal wild bird, albeit tolerant of human presence. Note the slim body conformation and wild plumage, both of which are atypical of domesticated birds. Taylor Creek, El Dorado County, California, 6 October 2013. Photograph by L. D. Dieter.

Mallards are well known to exploit seasonally abundant food resources (Heitmeyer 2006, Lafferty et al. 2013) in order to meet nutrient reserves necessary for reproduction and migration (Krapu 1981, Ankney et al. 1991). The ability to use various habitats and food sources likely explains the widespread abundance of mallards; information included herein further confirms this plasticity in their food habits, and provides an additional description of a foraging behavior that previously has been documented poorly in the formal literature.

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