Key words: coastal, diet, latrine, *Lontra canadensis*, Nearctic River Otter, northern California, scat

An animal’s ability to acquire and assimilate energy is key to its fitness and survival. Dietary assessment of an organism is prerequisite to understanding its ability to achieve daily energetic needs, ultimately affecting population status and viability (Brafield and Llewellyn 1982). This is particularly relevant for the Nearctic River Otter (*Lontra canadensis*), a carnivore at the top of the aquatic food web which has adapted to a wide variety of aquatic ecosystems. The River Otter’s high metabolic rate necessitates the capture of large quantities of prey daily (*sensu* Kruuk 2006). In this study, we located otter latrine sites during a 12-mo annual cycle in coastal northern California (2005–2006), reporting the frequency of prey remains found in otter scat (spraint) collected at these sites and comparing values to those reported in other regional studies.

We collected River Otter scat from 13 latrines at 5 sites around the perimeter of Humboldt Bay, and from a 6th site 19 km north along the Pacific coast in Humboldt County, northern California. Humboldt Bay (UTM: Zone 10, E 407634, N 4523226, NAD 27) is the 2nd largest estuarine bay in California with a surface area of 62.4 km$^2$ at high tide (Proctor and others 1980). Extensive tidal mudflats, drainage channels and adjacent sloughs are exposed at low tides, giving way to saltmarsh habitat at higher elevations where most of the latrines were located. Humboldt Bay saltmarshes are dominated by Pickleweed (*Salicornia virginica*), Humboldt Cordgrass (*Spartina densiflora*), and Saltgrass (*Distichlis spicata*) (Barnhart and others 1992). The northernmost site, Little River, is a riparian estuary adjacent to agricultural pastures and dune habitat. The 6 study sites (Table 1) comprised 1 estuary running into the ocean through a sand-spit habitat, 1 dead-end slough at the north end of the bay, 1 water treatment marsh complex adjacent to the bay, 1 deep channel of the bay, and 2 watercourses running into the bay. The sites were influenced by semi-diurnal tides. Based on temporal and spatial information from multiple re-sightings, we hypothesized that the latrine sites were visited by separate resident female-family groups and transient males (Black 2009; also see Shannon 1989).

Humboldt Bay is inhabited by a diverse number of fish species including estuarine and marine taxa; 110 species have been recorded (Barnhart and others 1992). Salmonid migrations through the bay occur from spring to early winter depending on species (Groot and Margolis 1991; Barnhart and others 1992). Juvenile fish migrate seaward through spring into summer (Groot and Margolis 1991; CDFG 2004; NRS 2005). Several types of crustaceans (mostly *Cancer* spp.) are prominent in Humboldt Bay and adjacent nearshore waters (Barnhart and others 1992). Dungeness Crab (*Cancer magister*) is known to be seasonally abundant in estuaries, with peak populations occurring in summer (McMillan and others 1995). The bay and adjacent habitats also are key wintering and migratory staging areas for thousands of waterbirds, peaking during the winter months (Colwell 1994; Harris 2005).

All scat discernable as individual deposits were collected at least once per month from each site from 19 July 2005 through 27 July 2006. River Otter scat has a unique smell and is thought to function as part of their scent communication (Rostain and others 2004; Oldham and Black 2009). When no scat was located, the site was visited again within 2 wk. Each scat was washed in a mechanical washing machine in a nylon stocking and then air dried in a paper cup (Golightly and others 1994).