

Purple Sandpiper

Calidris maritima

Justification

Shorebird scientists in North America are concerned about purples because of their relatively small population size and potential long term declines.

According to the US Shorebird Plan (2001) Priority scores for both subspecies of Purple Sandpiper in North America were "Species of High Concern".

Purple Sandpiper were rated "high concern" in the USFWS Birds of Conservation Concern – BCR 14 (2002).

They are also one of ten shorebird species identified as a focal species in the Atlantic Flyway Shorebird Business Strategy (2013).

We know so very little about this species, despite recent intensive breeding shorebird PRISM surveys in the Arctic, very few Purple Sandpiper were observed, apparently they are difficult to find, more so than the other Arctic breeders. Andres (*et al.*) in Wader Study Group Bulletin Vol 119 (3) 2012, estimate North American breeding population of both subspecies is about 25,000. The CBC indicates a reliable long-term decline of 1.8% per year (Butcher & Niven 2007) although a substantial portion of the population winters on nearshore islands outside of CBC count circles. We need more data to determine Purple Sandpiper trends.

Maine – We have systematically surveyed the entire Maine coast to provide baseline data on Purple Sandpiper wintering population status. We tallied 13,318 purples and after accounting for birds present but not detected we estimate that 14,000 – 17,000 Purple Sandpiper winter in Maine between 2002 – 2007. We have a large percentage of the NA population wintering in Maine, and yet do not have a reliable trend estimate.

The short answer - We identified it as a species of greatest conservation need because of our high responsibility for this species; lack of information on population status, and relatively small population size, if NA estimates are accurate (and I am not sure they are) there are fewer purples than red knots (a candidate species for federally listing as endangered).

Ecology

Behavior This species is fully migratory (del Hoyo et al. 1996, Snow and Perrins 1998). It arrives on the breeding grounds from mid-May to mid-June where it nests in solitary pairs (del Hoyo et al. 1996) and forages in small loose groups (Snow and Perrins 1998). From July to August the adults undergo a flightless moulting period on the coast close to the nesting areas before travelling to the wintering grounds in September and November (Hayman et al. 1986). During the non-breeding season the species is gregarious and usually forms small flocks of up to 250 individuals (del Hoyo et al. 1996). Habitat

Breeding The species breeds on Arctic coasts (Hayman et al. 1986) and in upland areas (Johnsgard 1981, Flint et al. 1984, Hayman et al. 1986), nesting close to the fringes of snow and ice (del Hoyo et al. 1996) on wet moss or barren rocky tundra with patches of lichen and *Dryas* spp., on rocky islands and islets or on shingle beaches (del Hoyo et al. 1996). It forages on dry tundra or along the moist margins of ponds, at the edges of melting snow-drifts and in areas of thick moss (Hayman et al. 1986). **Non-breeding** During the winter and on passage the species shows a preference for tidal rocky shores with strong wave action (Hayman et al. 1986) and suitable high-tide roosting areas (del Hoyo et al. 1996), often utilising artificial structures such as concrete sea defences and breakwaters (Hayman et al. 1986). In some northern areas (e.g. Svalbard) the species frequents mudflats, shingle beaches and coastal lagoons before and after breeding but before migrating south (del Hoyo et al. 1996). **Diet** Breeding during the breeding season its diet consists largely of insects (e.g. adult, larval and pupal Diptera, Ichneumon wasps and aphids) and Collembola (springtails), as well as spiders, gastropods, annelid worms and some plant material (e.g. leaves, buds, berries and seeds) (del Hoyo et al. 1996). **Non-breeding** On the coast the species feeds predominantly upon molluscs (especially gastropods *Littorina* spp. and mussels *Mytilus* spp.) as well as insects (e.g. beetles and Diptera), small crustaceans (e.g. amphipods), annelid worms (del Hoyo et al. 1996), small fish (Johnsgard 1981) and algae (*Enteromorpha* spp.) (del Hoyo et al. 1996). **Breeding site** The nest is a small scrape positioned in the open on tundra moss (del Hoyo et al. 1996), in hummocky tundra (Flint et al. 1984) close to tufts of *Dryas* spp. or *Arctostaphylos* spp. (Johnsgard 1981), or in rocky or pebbly areas between cliffs.