LESSER YELLOWLEGS

TAXONOMY

Scientific name: *Tringa flavipes* (Gmelin, 1789)
Common name: Lesser Yellowlegs
Family: Scolopacidae
Taxonomic comments:
Most classifications regard Greater (*Tringa melanoleuca*) and Lesser Yellowlegs (*T. flavipes*) as closely related species, however, some evidence suggests the yellowlegs are not sister taxa (Tibbitts and Moskoff 1999). Recent phylogenetic analysis supports placing Greater Yellowlegs as a sister species to Spotted Redshank (*T. erythropus*) with Lesser Yellowlegs among an unresolved group of other tringines, including Marsh Sandpiper (*T. stagnatilis*), Common Redshank (*T. totanus*), and Common Greenshank (*T. nebularia*; Chu 1995, Tibbitts and Moskoff 1999).

DESCRIPTION

Basic description: A medium-sized shorebird.

General description:
A medium-sized shorebird; distinguished from most other shorebirds by its slender body, long neck, long, bright yellow legs, and graceful stride. In breeding plumage, upperparts are mottled gray-brown, white, and black; underparts white with brown streaking on neck and breast and irregular, blackish barring on anterior flanks (Tibbitts and Moskoff 1999). The long, thin bill is solid gray in nonbreeding birds and black in breeding birds; eyebrows and eye-rings are starkly white. Juvenile birds display darker and heavier barring on the neck, breast, and flanks.
Length (cm): 27
Weight (g): 81

Diagnostic characteristics:
Smaller (27 cm) than Greater Yellowlegs (36 cm); legs of Lesser Yellowlegs are proportionally longer and is longer-winged and shorter-billed than the Greater Yellowlegs.

Voice is diagnostic in all seasons and often is the most reliable field mark; very noisy on the nesting grounds. A typical call consists of 1-3 notes (usually 2) that are lower pitched, more rapid, and much less resonant than Greater Yellowlegs' characteristic 3-4 note call.

Reproduction:
Eggs are laid usually mid-May to late June. Both sexes, in turn, incubate the typical clutch of 4 eggs for 22-23 days (Terres 1980). Precocial young are tended by both parents and can fly at 18-20 days. May nest in loose colonies (Hayman et al. 1986), although this is not typical in Alaska breeding populations (Tibbitts pers. comm.).

Ecology:
Often travel in loose flocks, but concentrations of thousands occur at preferred foraging sites during migration and at major wintering areas in Suriname (Tibbitts and Moskoff 1999). Often found in company of congener, the Greater Yellowlegs. Adults and young preyed upon by numerous raptors and large gulls; mammalian egg and nest predators include coyote (*Canis latrans*), red fox (*Vulpes vulpes*), marten (*Martes americana*), and mink (*Mustela viso*n). Reports of domestic cats preying on downy chicks in Anchorage, Alaska (Tibbitts and Moskoff 1999).

Migration:
Primary routes are midcontinental (mostly west of the Mississippi River) in spring and both midcontinental and along the Atlantic coast in fall (Tibbitts and Moskoff 1999). Migrates regularly throughout North America south of breeding range and eastward (AOU 1983). Seen along U.S. coast during northward migration in April-May; in Canada, migrates primarily through interior in spring (Godfrey 1986). In fall many migrate farther east than they do in spring, reaching eastern Canada and Atlantic states; some of these may then fly nonstop to South America (Johnson and Herter 1989). Southward migration begins early July, continues into October (Hayman et al. 1986). Migrates through Costa Rica August to mid-October and March-early May (Stiles and Skutch 1989). Reaches South America by early August, most depart by mid-April (Hilty and Brown 1986). Usually arrives in southcentral Alaska in late April; southwest and northern Alaska by mid-May; failed breeders leave in mid-July, juveniles in late July-early August (Tibbitts and Moskoff 1999).

Major North American stopover sites include Cheyenne Bottoms Wildlife Management Area, Kansas; Quill Lakes, Saskatchewan; North Dakota State University, Fargo, North Dakota; San Bernard National Wildlife Refuge (NWR), Texas; Union Slough NWR, Iowa; and Brazoria NWR, Texas (Skagen et al. 1999).

Food:
Aquatic and terrestrial invertebrates, particularly flies and beetles; occasionally small fish and seeds (Tibbitts and Moskoff 1999). Forages by snatching prey with bill.

Habitat:
Breeding: Boreal forest (generally open forest) and forest/tundra transition habitats, rarely in adjacent subarctic tundra. Often nests in drier, more densely vegetated habitats than sympatric Greater Yellowlegs; but occasionally found nesting within tens of meters of Greater Yellowlegs in wet bogs and open muskegs (Tibbitts and Moskoff 1999).

Typical nesting areas contain a combination of open areas and shallow wetlands, trees or shrubs. Nesting habitat has been described as open or semi-open forest (coniferous or deciduous) interspersed with marshes, bogs, ponds, lakes and sedge meadows. Nest is a depression in ground, often on a dry mossy hummock or ridge, next to fallen branches and logs, and beneath low shrubs or small trees (Palmer 1967, Spindler and Kessel 1980, Johnsgard 1981, Tibbitts and Moskoff 1999).

Non-breeding: Utilizes a wide range of wetland habitats. Intertidal mudflats, adjacent open lagoons, coastal lagoons, marshes and wetlands (often associated with river mouths) are most important habitats throughout South America. Use varies with rainfall, e.g., at coastal sites in Suriname, tidal flats are used during the dry season (Aug.-Dec.) and adjacent shallow lagoons and marshes during the rainy season (Dec.-Mar.). In north coastal South America, birds concentrate where shallow lagoons and brackish herbaceous marshes lie adjacent to the outer coast. Flooded agricultural fields (especially rice fields) have also become important habitat (Johnsgard 1981, Hayman et al. 1986, Morrison and Ross 1989, Tibbitts and Moskoff 1999).

Foraging: Forages in fresh, brackish, and salt water habitats. Breeders in Alaska forage in salt-marsh ponds surrounded by sedges, arrowgrass, plantain, and spruce bog pools edged with a variety of low shrubs (Tibbitts and Moskoff 1999).

STATUS

Global rank: G5 (25Nov1996)
Global rank reasons:
Secure – widespread and abundant.

State rank: S5B (reviewed 8Nov2005)
State rank reasons:
Widespread and abundant. Alaska breeding population estimated at 125,000–250,000 birds. A nonsignificant decline of -1.7% per year observed between 1980 and 2004 in Breeding Bird Survey data. Potential threats include habitat alteration or loss of boreal forest breeding grounds and contamination from oil spills in the Cook Inlet area.

DISTRIBUTION AND ABUNDANCE

Range:
Global range:
Breeding: from north-central Quebec to western Alaska and from southern portions of the Prairie Provinces to northern Mackenzie (Tibbitts and Moskoff 1999); unconfirmed breeding south to southern Wisconsin and northern Illinois.

Non-breeding: mainly from southern U.S. (Texas, Louisiana, Florida, South Carolina) south through Middle America, West Indies (present all year in Puerto Rico and Virgin Islands), and South America (to Tierra del Fuego); the major coastal non-breeding areas

in South America are the Guyanas, especially Suriname (Morrison and Ross 1989); uncommon but regular in Hawaii. Nonbreeders may summer in winter range.

State range:
Breeding: In Alaska, breeds throughout the area bordered by Anaktuvuk Pass in the north, Kobuk River in the northwest, Sheenjek Valley in the northeast, Situk River Flats in the southeast, and Innoko National Wildlife Refuge in the west. Further field studies will likely expand known breeding range to include westcentral Alaska (westward to southcentral Seward Peninsula; Tibbitts and Moskoff 1999).

Abundance:
Global abundance:
Global population estimated at 500,000 individuals (range 300,000–800,000; Morrison et al. 2001, Sinclair et al. 2004).

State abundance:
Alaska breeding population estimated between 125,000 and 250,000 birds (25–50% of global population; Alaska Shorebird Group 2004). However, no comprehensive effort has been made to quantitatively estimate the size of the Alaska population (ADFG 2005).

Trends:
Global short term trend:
Significant decline (-17.1% per year, $P<0.00$, n = 29 routes) between 1980 and 2004 along Breeding Bird Survey (BBS) routes survey-wide (in Canada, the conterminous U.S. and Alaska; Sauer et al. 2005). Migration counts from Ontario also indicate a downward trend; between 1976 and 1997, the annual rate of change for Lesser Yellowlegs migrating through eastern Canada was -7.13% ($P < 0.13$, n = 22; Ross et al. 2001). Christmas Bird Count data suggest an increase (1959–1988) in the U.S. wintering population, particularly in Florida (see Sauer et al. 1996 in Tibbitts and Moskoff 1999). Trends for wintering populations outside the U.S. are unknown (Tibbitts and Moskoff 1999).

Global long term trend:
Historically much more abundant prior to exploitation through sport hunting during the late 1800s into the early twentieth century (Bent 1927), although this trend was likely only a local phenomenon.

State trend:
A nonsignificant decline of -1.7% per year ($P < 0.23$, n = 45) based on Alaska BBS data for the period 1980 -2004 (Sauer et al. 2005).

EXISTING PROTECTION

Global protection:
Protected in the U.S. and Canada under the Migratory Bird Treaty Act. Numerous sites important to this species are protected at some level in their respective countries (e.g. state, federal, private). Many are designated sites in the Western Hemisphere Shorebird

Reserve Network (WHSRN). Several other sites that support relatively high numbers during migration and winter currently have little or no official protection (Tibbitts and Moskoff 1999).

State protection:
Breeding habitat protected where species occurs in National Wildlife Refuges, National Parks, and State Game Sanctuaries.

CHALLENGES

Global challenges:
Potential threats include habitat degradation on breeding and wintering grounds, exposure to contaminants, and sport hunting.

Degradation of habitat: Threatened by habitat loss from development (e.g., wetland drainage) or alteration as a result of road construction or agricultural practices. However, this species will nest along seismic lines, in agricultural fields and along roadsides, suggesting it can adapt to habitat change (Tibbitts and Moskoff 1999). Many wetlands along migratory routes and wintering areas were destroyed or manipulated in the early 1900s; wooded wetland habitats in Central and South American wintering range continue to be altered and lost at considerable rates (Tibbitts and Moskoff 1999).

Contamination: Birds may be exposed to oil, pesticides and other contaminants in estuaries, flooded agricultural fields, and sewage lagoon habitats (Tibbitts and Moskoff 1999). During a five-year study (1967–1971) on the effects of the organochlorine aldrin on rice fields in the Texas Gulf coast, twelve birds were found dead of aldrin-dieldrin poisoning. Tissues collected from several birds near Corpus Christi, Texas contained relatively high levels of selenium. Elevated levels of the organochlorine DDE were found in tissues of migrant birds collected in Peru, Ecuador and Costa Rica (Tibbitts and Moskoff 1999).

Hunting: During the early twentieth century, Lesser Yellowlegs were a popular game species; large numbers were harvested at many migration and wintering sites (Tibbitts and Moskoff 1999). After the passage of the Migratory Bird Treaty Act (1927), shorebird hunting declined throughout North America; however, as recently as 1991, several thousand Lesser Yellowlegs were still being shot annually by sport hunters in Barbados; a few birds were shot illegally each fall (1976–1989) at a site in British Columbia; and several recent observations of crippled birds or birds missing feet and legs in Alaska and British Columbia may be attributed to hunting (Senner and Howe 1984, Tibbitts and Moskoff 1999).

State challenges:
In Alaska, potential threats include habitat degradation on the breeding grounds, exposure to contaminants, and sport hunting (See Global threats). The effects of climate change on boreal wetlands are unknown, but of concern. Large numbers of birds use the Cook Inlet area where substantial offshore oil and gas development occurs; containment and cleanup

of an oil spill may be made more difficult by the powerful currents and ice flows associated with Cook Inlet (Gill and Tibbitts 1999).

RESEARCH AND INVENTORY NEEDS

Global research needs:
Identify reasons for the observed decline. Breeding ecology needs study; long-term research needed on breeding behavior, habitat use, breeding success, survival, and productivity (Tibbitts and Moskoff 1999). More information needed on effects of habitat alteration. Studies that measure habitat requirements during migration and on wintering grounds needed. Assess the magnitude of possible hunting and exposure to contaminants on nonbreeding range (Tibbitts and Moskoff 1999).

State research needs:
Breeding ecology needs study, including identification of habitat requirements during the breeding season. Effects of landscape changes, including changes in the extent and primary productivity of boreal forest wetlands should be monitored and effects on Lesser Yellowlegs evaluated (Tibbitts and Moskoff 1999, ADFG 2005).

Global inventory needs:
Standardized programs to monitor population size should be established and/or continued at representative breeding, migration, and wintering areas (Tibbitts and Moskoff 1999). Assess the accuracy of BBS trend data for detecting Lesser Yellowlegs. Identify important migratory stopover and wintering areas used by specific populations; determine fidelity to these sites (Tibbitts and Moskoff 1999).

State inventory needs:
Verify the accuracy of existing trend data in Alaska and implement more extensive off-road surveys. A statistically valid statewide monitoring protocol for boreal forest shorebirds including Lesser Yellowlegs should be developed, tested, and implemented (ADFG 2005). Helicopter surveys have potential value for this species where it does not overlap with the Greater Yellowlegs in distribution, as a supplement to roadside surveys such as the BBS; additional surveys could be coordinated with existing point count and ground-based wetland surveys for other species (Sinclair et al. 2004).

CONSERVATION AND MANAGEMENT NEEDS

Global conservation and management needs:
See State conservation and management needs below.

State conservation and management needs:
Information is needed to determine the conservation status of this species including development of standardized monitoring programs and/or reassessment of current monitoring techniques (i.e. BBS; see State inventory needs; Tibbitts and Moskoff 1999).

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Reviewer(s): Lee Tibbitts, U.S. Geological Survey, Alaska Science Center, Anchorage, AK.

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