
American Three-toed Woodpecker

Picoides dorsalis

Aves — Piciformes — Picidae

CONSERVATION STATUS / CLASSIFICATION

Rangewide:	Secure (G5)
Statewide:	Imperiled (S2)
ESA:	No status
USFS:	Region 1: No status; Region 4: Sensitive
BLM:	No status
IDFG:	Protected nongame

BASIS FOR INCLUSION

Unknown population trend in Idaho; habitat threats.

TAXONOMY

New World *dorsalis* and Old World *tridactylus* populations of three-toed woodpeckers were recently split (American Ornithologists' Union 2003) on the basis of differences in mitochondrial DNA (Zink et al. 1995, 2002) and voice (Winkler and Short 1978, Short 1982). Originally considered to be separate species, the merger of New World *dorsalis* into Old World *tridactylus* (e.g., American Ornithologists' Union 1931, Peters 1948) was never explained (American Ornithologists' Union 2003). Hence, the American three-toed woodpecker (*P. dorsalis*) is once again considered a separate species from the Eurasian three-toed woodpecker (*P. tridactylus*). Based upon differences in both size and the amount of white on the back, 3 subspecies are recognized: *P. d. dorsalis*, *P. d. fasciatus*, and *P. d. bacatus* (Leonard 2001). The subspecies that occurs in Idaho is likely the *P. d. fasciatus* although a zone of integration has been noted between *P. d. fasciatus* and *P.d. dorsalis* in northern Montana (Leonard 2001).

DISTRIBUTION AND ABUNDANCE

American three-toed woodpecker distribution generally follows the distribution the boreal forest region, and this species is the only species of woodpecker to occur in both the Nearctic as well as the Palearctic (Leonard 2001). American three-toed woodpeckers occur as far north as Alaska, and extend through the boreal forests of Canada south into the lower 48 states. Within the western U.S., American three-toed woodpeckers occur in: (1) the Cascade and Blue Mountains of Washington; (2) the Cascade, Blue, and Willowa Mountains of Oregon; (3) the northern and central portions of Idaho; and (4) the Rocky Mountains of western Montana (Leonard 2001).

POPULATION TREND

In general, it is difficult to ascertain population abundance and trends since this species is highly irruptive and colonizes disturbed forests across the landscape (Leonard 2001). Breeding Bird Survey (BBS) data are available for this species, but the number of detections are so low as to lend low credibility to the trends assigned for this species (Sauer et al. 2005). Sauer et al. (2005) note a 16.9% increase in the western region (*n*

= 44), with no data available for Idaho. Several studies have noted declines that have been attributed primarily to logging activities of old growth forests (see Leonard 2001).

HABITAT AND ECOLOGY

American three-toed woodpeckers are generally associated with spruce forests, although their occurrence in other types of coniferous forest varies geographically (Leonard 2001). American three-toed woodpeckers flake off bark to forage on bark beetles (Scolytidae), and are typically found in old growth forests and/or disturbed areas that have high densities of bark beetle larvae (Kreisel and Stein 1999, Murphy and Lenhasuen 1998). While any disturbance that produces a large number of dead/decaying trees may be important for this species (i.e., insect outbreaks, flooding, disease), multiple studies have noted the importance of burns for American three-toed woodpeckers (see Leonard 2001). Not all burns are equally suitable for this species since their main prey (bark beetles) tend to decline in abundance with post-fire succession. The survival of bark beetle larvae in post-fire environments is related to the moisture content of bark and phloem (Hoyt and Hannon 2002). Because bark beetle survival decreases as the trees dry out, American three-toed woodpeckers tend to occur at the highest densities in burns between 0–3 years old, which is when bark beetle densities are the highest (Hoyt and Hannon 2002). In addition to the age of burn, burn severity also may be important, as American three-toed woodpeckers tend to occur in burned forests that have a high density of lightly burned trees (Hoyt and Hannon 2002). Old growth forests also are important, and use of these forests have been noted throughout the range of this species. American three-toed woodpeckers typically nest in snags; Goggans et al. (1988) report that 96.7% of all nests were in snags, and that 84% occurred within unlogged plots.

ISSUES

Fragmentation and habitat loss are the main issues of concern for this species. Since American three-toed woodpeckers rely on dead and decaying trees for both nesting and foraging, they are extremely susceptible to forestry management practices that reduce these trees in the landscape. The removal of dead and decaying trees may occur for a variety of reasons (i.e., salvage logging, fire suppression logging), and these activities have likely negatively influenced populations in recent years (Leonard 2001). Additionally, logging rotations that do not allow old growth forests to develop have likely been detrimental to this species (Hoyt and Hannon 2002). Hoyt and Hannon (2002) as well as Leonard (2001) note that additional information on the reproduction and demography of this species in different forest environments will be necessary to better evaluate the relative strength of the threats facing American three-toed woodpeckers in different habitats.

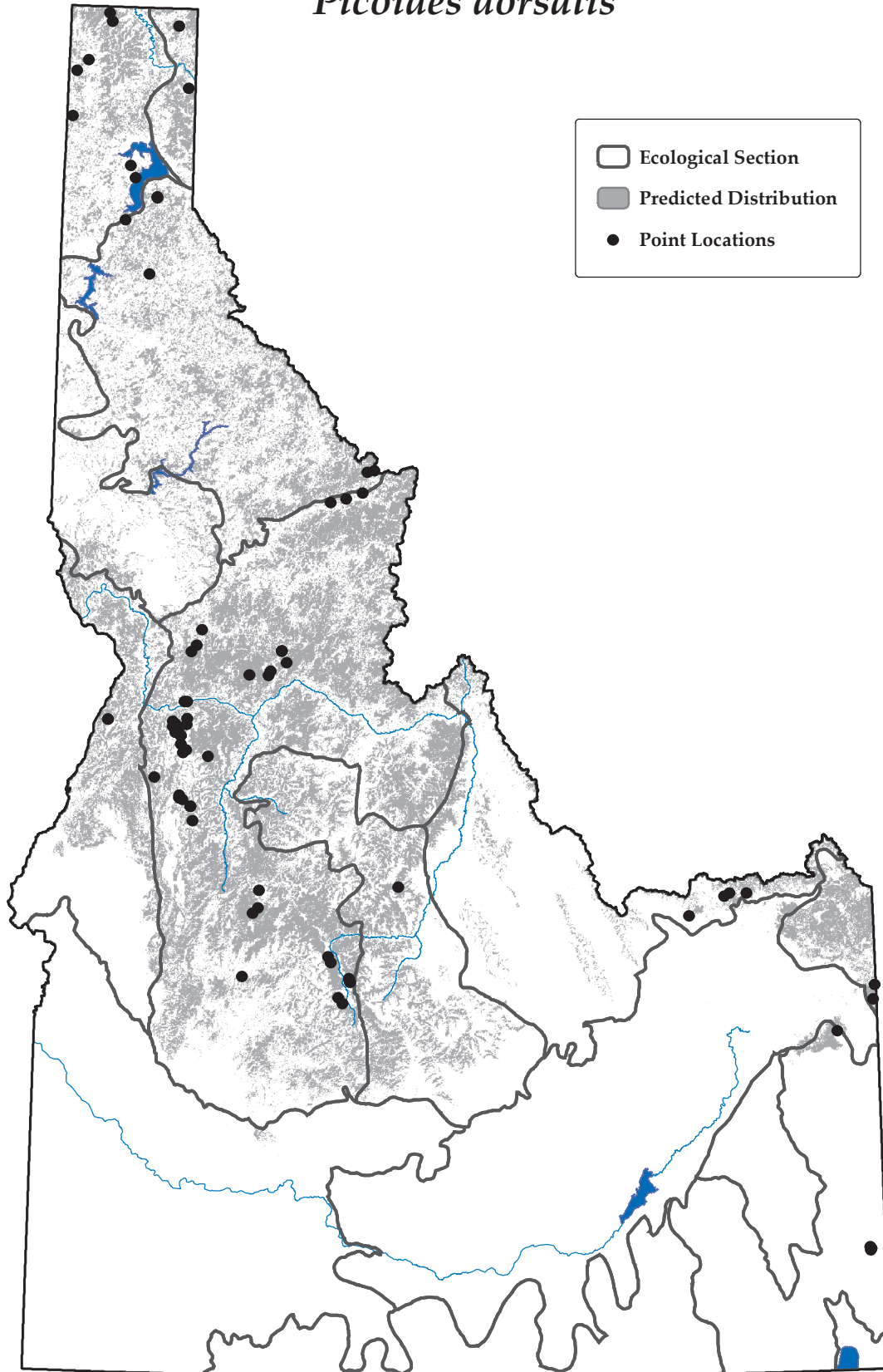
RECOMMENDED ACTIONS

Management activities that retain large patches of dead and decaying trees for nesting and foraging are necessary for this species. Goggans et al. (1988) suggest retention of 214 ha (579 ac) per pair in old growth mixed conifer forests. Because relatively little is known about the demography of American three-toed woodpeckers in different habitats, a landscape that provides suitable habitat for this species might be a matrix of old

growth forests mixed with forests undergoing disturbances (i.e., fire). As more information becomes available concerning the demographics of this species in different habitats, the optimal landscape matrix which is undergoing management can be adjusted accordingly.

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Map created on September 22, 2005
and prepared by Idaho Conservation Data Center.
Sources: Point data are from Idaho Conservation Data Center,
Idaho Department of Fish and Game (2005). Predicted distribution
is from the Wildlife Habitat Relationships Models (WHR),
A Gap Analysis of Idaho: Final Report. Idaho Cooperative Fish
and Wildlife Research Unit, Moscow, ID (Scott et al. 2002).
Predicted distribution is approximate (for more information, go to
http://www.wildlife.uidaho.edu/idgap/idgap_report.asp).

