

# Northern spotted owl

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## Northern Spotted Owl

The Northern Spotted owl (*Strix occidentalis caurina*) was listed as a threatened species under the Endangered Species Act in 1990 (Matrazzo & Cloughesy, 2007). It lives mostly in the old-growth forests in Oregon, a habitat that is slowly reducing. Factors like competition from the Barred owl and wildfires also present a threat to the Spotted owl population. Although various initiatives have been taken to help conserve the Spotted owl, a lot more needs to be done in order to keep the population from dwindling.

### General Description

The Spotted owl is a medium-sized, dark brown owl with dark brown eyes. The white spots on the plumage give it its distinct look. It weighs about 1.3 pounds and is about 18 inches in length. The wing span of the Northern Spotted Owl is about 45 inches.

### Habitat

The Spotted owl is mostly found in the mixed conifer and conifer-hardwood forests in Western Oregon (Matrazzo & Cloughesy, 2007). They typically inhabit the old-growth forests that have several canopy layers and different species of trees for roosting and nesting. They have been found to prefer the younger forests for foraging and dispersing. Recent studies have revealed that the suitability of owl habitat depends to a large extent on forest heterogeneity and not merely on individual stand characteristics (Matrazzo & Cloughesy, 2007). In fact, 88% of Spotted owls in Oregon have been found to nest on Douglas-fir while hardwood trees like red alder and bigleaf maple have been found to be significant in roosting and foraging (Matrazzo & Cloughesy, 2007). This could be because of the fact that these trees provide

a good environment for the dusky-footed woodrats and northern flying squirrels to flourish – both of which are the key preys of the owl.

#### Major Threats to the Survival of the Spotted Owl

According to the United States Fish and Wildlife Services (USFWS), competition from the closely related Barred owl is the most serious threat that the Spotted owl is facing (Matrazzo & Cloughesy, 2007). The USFWS has found that the adaptability of the Barred owl in terms of having a smaller home range and wider prey selection makes it more successful in occupying the ecological niches of the Northern Spotted owl (Matrazzo & Cloughesy, 2007). In addition, timber harvesting and continuing reduction of the forests over the years has substantially reduced the owl's natural habitat. Severe wildfires in mixed conifer forests are also a major threat to the habitat of the Spotted owl.

Although sudden oak death is not an immediate threat to the habitat of the spotted owl, it can affect Oregon species like Douglas-fir, Coast redwood, Pacific madrone and Canyon live oak which would result in significant tree mortality affecting the forest structure and changes in prey population (Matrazzo & Cloughesy, 2007). Although not a current threat, the *Culex tarsalis* mosquito, which is a good vector to the West Nile Virus, is abundant across the range of the spotted owl and can become fatal to the Northern Spotted owl (Matrazzo & Cloughesy, 2007).

#### Strategies to Conserve the Habitat of the Spotted Owl

With respect to the federal forestlands, forest managers are required to implement all policies pertaining to habitat-restrictions as per the requirement of the Endangered Species Act. The non-federal forestlands can

also be conserved using some voluntary and creative approaches. Some of the strategies that have been identified by Matrazzo & Cloughesy (2007) include:

1. Providing U. S. Fish and Wildlife service awards and Endangered Species Grants for private landowners who are involved in local, private and voluntary conservation efforts that benefit the federally listed, proposed or candidate species or other at-risk species.
2. The Oregon Department of Fish and Wildlife offers technical and financial assistance of up to \$150, 000 to landowners who want to implement projects that enhance, protect or restore the habitat of the species.
3. The sustainable forestry initiative aims at growing and harvesting trees ensuring the protection of the wildlife, plants, soil, water and air quality. This initiative has encouraged some private timberland owners and managers to implement some practices in addition to the stipulated state forest practices to ensure the protection of the Northern Spotted Owl.
4. Another initiative to conserve the Spotted owl's habitat is the Habitat Conservation Plans which was created by landowners working in collaboration with the U. S. Fish and Wildlife Service. This initiative is especially useful for landowners with large tree farms.
5. The Safe Harbor Agreement is an initiative that encourages nonfederal landowners to manage the habitat of the listed species on non-federal property. In return, they are assured that no additional future regulatory restrictions would be imposed on them.

#### My Impression on Current Conservation Initiatives

I strongly feel that the general public should be made more aware on the

need to conserve the Spotted owl population. Although several initiatives have been implemented to achieve this, the overall impact on the recovery of the species has been limited. Currently there are only four Habitat Conservation Plans in Oregon and no Safe Harbor Agreements for Northern Spotted owls in Oregon. This reveals that we need to do a lot more in terms of forest management in order to conserve the Spotted owl population. Although one plan may not fit every landscape, every opportunity concerning the conservation of the spotted owl should be looked into.

#### References

Matrazzo, D. & Cloughesy, M. (2007). Wildlife in managed forests: Northern spotted owl.

Oregon Forest Research Institute. Retrieved from [http://www.oregonforests.org/assets/uploads/Wildlife\\_Mngd\\_Owl.pdf](http://www.oregonforests.org/assets/uploads/Wildlife_Mngd_Owl.pdf)