



OVERVIEW

Woodpecker Wars chronicles efforts to restore the endangered red-cockaded woodpecker (RCW) in North Carolina. The film shows how biologists from the US Fish and Wildlife Department, local landowners, and members of the US Army are working together to protect and revitalize the RCW's remaining habitat. Additional information can be found on [this episode's webpage](#).

KEY CONCEPTS

- Keystone species, such as the RCW, perform critical functions in their ecosystems.
- Many species are threatened by the disruption of important ecosystem processes, such as the suppression of naturally occurring wildfires.
- Collaboration between different people and groups is essential for effective conservation.

BACKGROUND

Red-cockaded woodpeckers (*Leuconotopicus borealis*), also known as RCWs, are found only in the southeastern United States. They live mostly in pine trees, preferably mature longleaf pines (*Pinus palustris*) that are at least 60 years old. RCWs often form "breeding groups," which consist of a male and female breeding pair and up to four additional young helper males. The helper males are offspring from previous generations that help incubate eggs and feed nestlings.

Unlike other species of woodpeckers, which nest in dead wood, the RCW drills its nests into living trees. These nests eventually become important homes for many species — including other woodpeckers, wood ducks, owls, squirrels, lizards, and frogs. Because of the biodiversity they support, RCWs are considered a **keystone species**, species that play an "oversized" role in their environments.

As people started cutting down longleaf pines for shipbuilding and other uses, the number of RCW breeding groups plummeted from 1.5 million prior to 1910 to just 4,000 in 1995. The RCW was officially designated an endangered species in 1970 and was among the first species listed on the Endangered Species Act (ESA) of 1973.

One of the last remaining longleaf pine forests is in Fort Bragg (renamed Fort Liberty in 2023), a US Army base in North Carolina that has become an important RCW habitat. Despite concerns that military training would disrupt the birds, it was discovered that the training itself was indirectly helping the habitat. Live-fire exercises regularly start low-intensity fires, similar to the natural wildfires sparked by lightning. These periodic fires clear out competing vegetation and dead organic matter, return nutrients into the ecosystem, and stimulate new growth — all of which are important for forest species.

In the past, the prevailing US policy was to practice **fire suppression** (putting out wildfires whenever possible), which disrupted the natural ecosystem processes. Bringing fire back through controlled burns, both on and off the base, has led to healthier forests. These and other initiatives have produced incredible results for the RCW and many other species. Conservation efforts have been so successful that in 2022, the US Fish and Wildlife Service proposed downlisting the RCW from endangered to threatened.

People/groups highlighted in the film include:

- The US Fish and Wildlife Service, a government agency that enforces the Endangered Species Act. Their work also includes managing programs that provide conservation incentives.
- Military personnel at the US Army base Fort Bragg (now known as Fort Liberty), which contains an important habitat for the RCW.
- Landowners who are using controlled burns to create RCW habitat on their properties and educating others in their community.

BIODIVERSITY THREATS

Five of the biggest threats to biodiversity are represented by the acronym **HIPPO**: **h**abitat loss, **i**nvasive species, **p**ollution, **p**opulation growth (of humans), and **o**verharvesting. The HIPPO threats shown in this film include:

- **Habitat loss:** Many longleaf pine forests were destroyed or degraded due to logging, urbanization, and fire suppression.
- **Population growth:** The growing human population led to more logging and urbanization.
- **Overharvesting:** Logging (harvesting of trees) for shipbuilding led to destruction of the forests.

DISCUSSION QUESTIONS

- (*Before the film*) What role do you think fire plays in a forest ecosystem?
- (*Before the film*) List five endangered species and come up with ideas for why each species is endangered. Identify any similarities among the causes you identified.
- Create a conceptual model that illustrates how plant and animal species diversity is naturally maintained in the longleaf pine ecosystem.
- How have controlled burns benefited the RCW and other species, especially compared to previous fire suppression strategies?
- Describe three specific species that could benefit from conserving RCWs.
- Collaboration between different people and groups is essential for effective conservation. Describe some specific examples of collaboration in the film and how they have been successful.

REFERENCES

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CREDITS

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