



Ben-Gurion University of the Negev

Jacob Blaustein Institutes for Desert Research

The Swiss Institute for Dryland Environmental and Energy Research

Mitrani Department of Desert Ecology

Special seminar

Danilo Russo

Wildlife Research Unit,
Dipartimento di Agraria,

Università degli Studi di Napoli Federico II, Italy



Tuesday, August 20, 2019, 12:00

Seminar Room, Old Administration Building

Managing Forests for Bat Conservation: Barbastelle Bats as a Case Study

Intensive forest management leads to profound alterations of forest structure and age, and also reduces roosting opportunities for forest-dwelling bats. The barbastelle bat *B. barbastellus* shows a strong preference for unmanaged forest and relies heavily on the availability of dead trees, mostly roosting beneath loose bark, so saving unmanaged forest patches is essential for their survival. Bats switch roosts frequently, probably to memorize the location of alternative roosting sites and check their current suitability. The clustering of bats in roosts buffers microclimate from abrupt oscillations facilitating thermoregulation. Large numbers of dead trees must be retained to preserve this species, and veteran or decaying trees should be saved from logging to favour the natural turnover of standing dead trees that are removed by physical or biological agents.

B. barbastellus also tends to colonize forests subject to logging, where increasing standing dead wood availability might probably encourage the establishment of new populations. Although the bat's ecological requirements apparently match those of other management-dependent animal taxa such as the long-horned beetle *Rosalia alpina*, subtle differences exist that could be missed at broad scales, so forest management should avoid umbrella species approaches and be tailored on the species' needs. *B. barbastellus* may persist in open landscapes whose current structure is the result of historical deforestation, such as clay badlands where woody vegetation is scarce, which highlights the overlooked importance of apparently unsuitable landscapes to preserve this species.