

Testimony from Dr. John D. Lloyd, Director of Science, Vermont Center for Ecostudies, on H.552.

28 January 2016

Thank you for the opportunity to testify on H.552. I am the Director of Science at Vermont Center for Ecostudies (VCE). VCE conducts scientific research that supports and informs policies and actions that advance wildlife conservation. The scientists at VCE have a long history of conducting research on rare, threatened, and endangered species in Vermont, and several also serve on the Scientific Advisory Groups to the Vermont Endangered Species Committee. As such, VCE has significant expertise in the areas with which H.552 is concerned.

VCE strongly supports the proposed updates to Vermont's threatened and endangered species act that allow for the designation of critical habitat. In our opinion, the lack of clearly established protections for critical habitat is a significant shortcoming of the current threatened and endangered species act, one that almost certainly impedes the conservation and recovery of listed species. A fundamental tenet of conservation biology is that the viability of any species depends on the presence of suitable habitat. Simply put, no species can persist without places to find food, to rear young, or to escape from predators or inclement weather. Thus, species conservation is impossible absent effective habitat conservation.

Protecting individual plants and animals from direct harm, the focus of the current threatened and endangered species act, is important but insufficient as a means to conserve and recover species. The vast majority of threatened and endangered species are imperiled due to loss, fragmentation, and degradation of habitat. Designating habitat that is critical for survival and reproduction is therefore essential for reducing extinction risk and promoting recovery; focusing solely on avoiding harm to individual plants and animals cannot solve a problem caused by damaged and diminished habitat.

Empirical evidence supports adding provisions for critical-habitat designation to Vermont's threatened and endangered species act. At least two published research studies¹² have documented that the designation of critical habitat under the federal Endangered Species Act (ESA), which occurs under a process similar to that envisioned by H.552, results in significantly improved conservation outcomes. Listed species for which critical habitat has been designated are more likely to show increasing population trends than are listed species without designated critical habitat. Studies like this demonstrate clearly that the designation and conservation of critical habitat produces gains above and beyond those realized by focusing solely on prohibitions against causing harm to individual plants or animals. Studies

¹ Rachlinski, J.J. 1997. Noah by the numbers: an empirical evaluation of the Endangered Species Act. *Cornell Law Review* 82:356-389.

² Taylor, M.F.J, K. F. Suckling, and J.J. Rachlinski. 2005. The effectiveness of the Endangered Species Act: a quantitative analysis. *BioScience* 55:360-767.

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like this also serve to rebut a common complaint concerning critical habitat designations, namely that they are redundant of prohibitions against the take of listed species and thus unnecessary.

For critical habitat designations to achieve the goal of recovering listed species, it is imperative that protections include both critical habitat that is currently occupied by the listed species and critical habitat that is currently unoccupied, and thus we support the language authorizing the Secretary to consider current and historic use of habitat. A basic pattern in ecology is that as a species becomes increasingly rare, it will be found in increasingly fewer locales. An expanding population - a key objective in conservation of threatened and endangered species - needs room to grow, so focusing protections solely on where a listed species occurs at present can effectively preclude its recovery.

Finally, we note with some concern the provision allowing, under certain circumstances, the destruction of and adverse impacts to critical habitat. This deviates from the federal ESA, which does not allow for adverse modification of critical habitat, even though it does provide for the incidental take of individuals of a threatened or endangered species. Although we recognize that regulatory flexibility can, in some cases, promote successful conservation, critical habitat is, by definition, necessary for the survival and recovery of a listed species. Allowing the destruction of critical habitat is not compatible with species recovery unless it is accompanied by offsetting activities, mitigation, or the implementation of best management practices to minimize impacts.

In summary, VCE believes that updating Vermont's threatened and endangered species act to allow for the designation of critical habitat is a positive change that is in keeping with mainstream scientific evidence about what works in conservation. Research from across the country demonstrates that designating and protecting critical habitat allows for the recovery and, ultimately, de-listing of threatened and endangered species in a way that prohibitions against direct take alone do not.