Blanchard's Cricket Frog (*Acris blanchardi*) Species Guidance

Formerly northern cricket frog (*Acris crepitans*)

Family: Hylidae - the treefrogs

State Status: Endangered (1982)

State Rank: S1

Federal Status: none

Global Rank: G5

Wildlife Action Plan Mean Risk Score: 3.6

Wildlife Action Plan Area Importance Score: 2

Counties with documented locations of Blanchard's cricket frogs in Wisconsin. Source: Natural Heritage Inventory Database, October 2012.

Rori Paloski, Wisconsin DNR

Photo by A.B. Sheldon

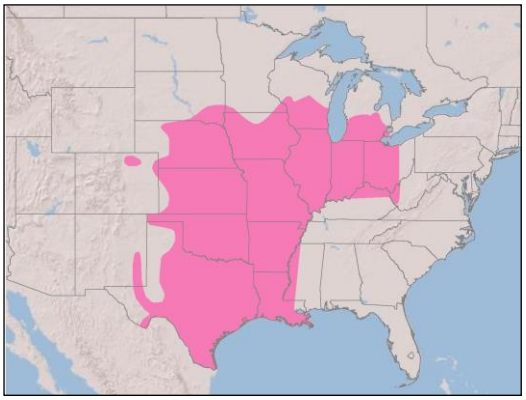
Species Information

General Description: The Blanchard's cricket frog is a small treefrog with a snout-to-vent length of 1.3-3.8 cm (0.5-1.5 in). This species' skin color is highly variable, and individuals may change color based on environmental conditions. The cricket frog's dorsal surface is warty/bumpy with a brown, green, gray or reddish tan background color. A dark triangle between the eyes or a brown, green, or rust colored dorsal stripe may also be present. Cricket frog larvae (tadpoles) typically have a distinct black tipped tail and can reach 4.7 cm (1.9 in) in total length. The cricket frog's breeding call resembles the sound of two ball bearings clicking together at an increasing frequency for five to seven seconds before rapidly tapering away. Individuals may vary in these characteristics, and some may differ slightly from this general description.

Similar Species: Spring peepers (*Pseudacris crucifer*) are similar in size and background color to cricket frogs, but a broken or complete "X" is always present on their back. Boreal chorus frogs (*Pseudacris maculata)* are also similar in size and background color, but always have dorsal stripes. Gray treefrogs (*Hyla versicolor*) and Cope's gray treefrogs (*Hyla chrysoscelis*), especially juveniles, resemble cricket frogs but have distinctive toe pads and as adults are larger in size. Juvenile American toads (*Anaxyrus americanus*) resemble cricket frogs, but have a stouter body, more rounded snout, and hop short distances rather than leap. Juvenile green frogs (*Lithobates clamitans*) are similar in appearance and size to adult cricket frogs, but have a dorsolateral fold running down each side of their back, and contain a tympanum behind each eye.

Associated Species: Species associated with the cricket frog and it's habitat include predators (i.e., common watersnakes [*Nerodia sipedon*], common gartersnakes [*Thamnophis sirtalis*], American bullfrogs [*Lithobates catesbeianus*; Carpenter 1952, Perrill and Shepherd 1989], coyotes [*Canis latrans*], raccoons [*Procyon lotor*], great blue herons [*Ardea herodias*], great egrets [*Ardea alba*], snapping turtles [*Chelydra serpentina*], and painted turtles [*Chrysemys picta*; Beasley et al. 2005]). Green frogs (*Lithobates clamitans*), spring peepers (*Pseudacris crucifer*), northern leopard frogs (*Lithobates pipiens*), pickerel frogs (*Lithobates palustris*), Cope's gray treefrogs (*Hyla chrysoscelis*), gray treefrogs (*Hyla versicolor*), boreal chorus frogs (*Pseudacris maculata*), and American toads (*Anaxyrus americanus*) are found using the same breeding wetlands (Wisconsin Department of Natural Resources, unpublished data).

State Distribution and Abundance: The cricket frog was once considered one of the most abundant frogs in southern Wisconsin. Over the past several decades this species has rapidly declined for unknown reasons throughout Wisconsin and the Upper Midwest. The cricket frog is still relatively abundant in Grant, Iowa, and Lafayette Counties, and has been confirmed at sites in Columbia, Crawford, Sauk, and Vernon counties since 2012. Additional unconfirmed reports (not yet verified by a species expert) have been received over the past several years from throughout the cricket frog's historic range in Wisconsin. Distribution information for this species may not reflect its full extent in Wisconsin, because many areas of the state have not been thoroughly surveyed.



Global range map for the Blanchard's cricket frog (*Acris blanchardi*; adapted from Gamble et al. 2008).

Global Distribution and Abundance: The Blanchard's cricket frog's current global range includes the central part of the United States ranging north to

southeastern South Dakota, west to northeastern Colorado, south to Texas, and east to the Mississippi and Ohio Rivers; with Wisconsin, Michigan, and southeastern Minnesota being the northern extent of the continental range (Gamble et al. 2008). Extreme northeastern Mexico (Conant and Collins 1998) and several small, possibly extirpated, populations in southern Ontario, Canada also contribute to the cricket frog's range. This species has been rapidly declining for unknown reasons at the northern and western fringes of its range in the United States over the past several decades. Populations throughout the central and southern portions of the range appear to be stable.

Diet: Prey items consist of a wide variety of annelids, mollusks, arthropods, crustaceans, and insects (Johnson and Christiansen 1976). Cricket frog larvae primarily consume phytoplankton (Johnson 1991). Adult cricket frogs are opportunistic feeders and consume a variety of aquatic and terrestrial invertebrates, primarily insects (Johnson and Christiansen 1976, Labanick 1976).

Reproductive Cycle: Cricket frogs are typically active from spring through late-fall and breed from late-May through mid-August, with calling concentrated from late-May through end-June. Cricket frog larvae complete metamorphosis in five to 10 weeks, generally between mid-July and mid-September (Wright and Wright 1949). Breeding and egg deposition will occur at the shoreline and in deeper water (> 1 m). Eggs are attached to emergent, submergent, or floating vegetation and occasionally on the water's surface, and deposited singly or in small clusters of two to seven up to 400 eggs. Eggs hatch in several days; timing varies with both air and water temperatures.

Ecology: Larvae spend most of their time in shallow, warm water. Newly transformed frogs occupy the same shoreline habitat as adults. Cricket frogs may call diurnally but are most active after dusk. Feeding occurs throughout the day and night (Johnson and Christiansen 1976). Cricket frogs' daily movements are relatively short, 0.3-15.0 m (1-50 ft), but seasonal migrations of up to 1.3 km (0.8 mi) have been documented (Pyburn 1958, Gray 1983, Burkett 1984, Perrill and Shepherd 1989, Dickson 2002, Gray et al. 2005). Cricket frog overwintering strategies are not well studied, but research has shown that cricket frogs cannot withstand inundation for more than 24 hours and are not freeze-tolerant (Irwin 2005). This species requires an overwintering microhabitat at or above the water level and in a location where they can avoid freezing (Irwin et al. 1999). Cricket frogs have been observed overwintering in shoreline cracks and crevices, under logs, and among leaves onshore in Illinois (Garman 1892, Pope 1944, Gray 1971). In Ohio, cricket frogs have been observed overwintering onshore beneath vegetation masses, and burrowed in gravel at depths of 20-36 cm (8-14 in; Walker 1946). In Wisconsin, overwintering typically occurs in sloughing banks and cracks/crevices in the uplands within 15 m (50 ft) of standing water (Badje et al. 2016). The physiological constraints and microhabitat requirements of the cricket frog may contribute to this species' short lifespan. Burkett (1984) documented only a 5% overwinter survival rate in Kansas cricket frog populations. Gray (1983) observed the highest levels of mortality in Illinois cricket frog populations during the non-breeding period as well with declines peaking in September and from April to May.

Natural Community Associations: (WDNR 2005, WDNR 2009):
Significant: coldwater streams, coolwater streams, emergent aquatic (emergent marsh), impoundments/reservoirs, inland lakes, southern sedge meadow, submergent aquatic (submergent marsh), warmwater rivers, warmwater streams, wet prairie
Moderate: none
Minimal: none

Habitat: Cricket frogs are an open-canopy habitat generalist and inhabit both semi-permanent and permanent water bodies (Vogt 1981, Oldfield and Moriarty 1994). Water bodies are most productive for this species when they support emergent, submergent and/or floating vegetation in the littoral zone. Cricket frogs are commonly found in ponds, lakes, streams, rivers, and wetlands, often with adjacent open or semi-open canopy habitats. Ideal habitat generally consists of gently sloping, muddy banks with emergent vegetation, but frogs may be also found in sandy areas or near steep slopes. Farm ponds and scrapes often provide ideal habitat for this species. Cricket frogs remain within or relatively close to water and wetlands throughout late spring and summer but may travel up to 23 m (75 ft) from standing water into adjacent open and semi-open canopy habitats. During periods of high water, cricket frogs follow the changing shoreline.



Suitable stream habitat for Blanchard's cricket frogs in Lafayette (left), Grant (center) and Iowa County (right). Rori Paloski, Wisconsin DNR.

Threats: Wisconsin listed the Blanchard's cricket frog as endangered in 1982 because of its rapid decline in abundance and distribution over the preceding several years. Causes of the decline have still not been identified, but possible threats include agricultural runoff, intensive grazing that causes shoreline disturbance and increasing turbidity, habitat alteration and/or shoreline development, natural succession of areas to closed canopy habitats, invasive species, and/or chemical contamination (Greenwell et al. 1996, Beasley et al. 2005, Gray et al. 2005). A short lifespan (4-16 months) and limited dispersal ability increases this species' vulnerability to local extinctions (Burkett 1984).

Climate Change Impacts: The potential effects of climate change may significantly inhibit growth and reproduction in cricket frogs (McCallum, 2010). The highly permeable skin and eggs of amphibians, and their need for both aquatic and terrestrial habitats throughout their life cycle, make this taxa group especially sensitive to changes and variability in air and water temperature, precipitation, and the duration and seasonality of water in their environments, including snow cover and snow melt (Carey and Alexander 2003). Changes in these environmental factors as a result of climate change may result in shifts in reproduction, metamorphosis, body size, dispersal, range boundaries, and migration (Beebee 1995, Blaustein et al. 2001, Gibbs and Breisch 2001, Corn 2005, McCallum et al. 2009). Changes in climate may also facilitate the spread of infectious diseases, such as chytrid fungus (Carey and Alexander 2003, Bosch et al. 2006). Local amphibian declines in Costa Rica have been directly linked to climatic changes (Pounds and Crump 1994, Whitfield 2007). The Wisconsin Initiative on Climate Change Impacts (WICCI) is currently assessing potential climate change impacts on Wisconsin's wildlife.

Survey Guidelines: Persons handling Blanchard's cricket frogs must possess a valid Endangered and Threatened Species Permit. If surveys are being conducted for regulatory purposes, survey protocols and surveyor qualifications must first be approved by the Endangered Resources Review Program (see *Contact Information*). Surveys to determine cricket frog presence/absence must consist of calling surveys conducted 5 times from May 25-June 30. All other survey protocols related to survey length, time of day, weather conditions, call index, etc., must be conducted according to WDNR Frog and Toad Survey methodology (Paloski et al. 2006). Visual encounter surveys are recommended along shorelines of associated wetlands, streams, and rivers throughout April 15-October 15.

Summarize results, including survey dates, times, weather conditions, number of detections, detection locations, and behavioral data and submit via the WDNR online report: <http://dnr.wi.gov, keyword "rare animal field report form">

Management Guidelines

The following guidelines typically describe actions that will help maintain or enhance habitat for the species. These actions are not mandatory unless required by a permit, authorization or approval.

This section provides guidance for maintaining, restoring and enhancing habitat for the Blanchard's cricket frog. The habitat management goal for this species is long-term preservation of open-canopy uplands connected, preferably broadly, to semi-permanent and permanent bodies of water.

Aquatic and shoreline vegetation are critical components of cricket frog habitat and should be protected and restored when managing for the species. Littoral vegetation (emergent, submergent, floating) should be kept intact, especially in water < 1 m (3.3 ft) deep, and woody growth and over-story vegetation should be kept to a minimum. Adjacent open canopy upland habitats should be protected and restored. Fragmentation of water corridors should be prevented in order to maintain cricket frog gene flow through dispersal among connecting watersheds. Un-manicured buffers of at least 23 m (75 ft) between urbanization, row crop fields, or active pastures and cricket frog habitat will minimize shoreline disturbance and reduce run-off.

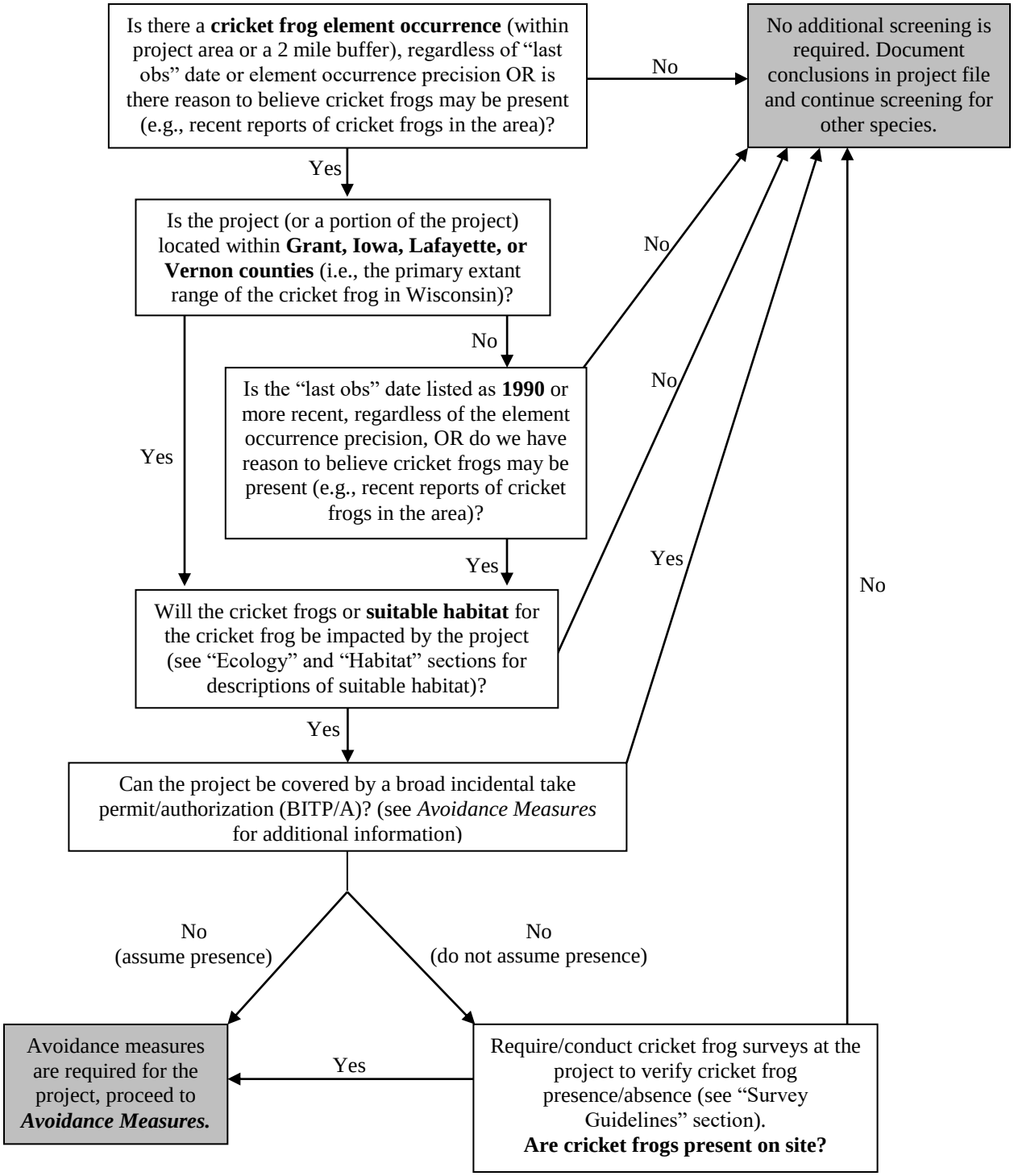
Cricket frogs use artificial water-bodies and wetlands, including farm ponds and scrapes. Shallow scrapes and restored wetlands are most beneficial to cricket frog populations when located within approximately 1 km (0.6 mi) of an existing cricket frog population.

Created or restored water-bodies and wetlands should be designed to provide surface water throughout the growing season in most years and maximize the shoreline:open-water ratio. Fishless breeding habitats improve recruitment for cricket frogs and other amphibians. Cricket frog occupied water-bodies should not be used or altered for fish-rearing.

Screening Procedures

The following procedures must be followed by DNR staff reviewing proposed projects for potential impacts to the species.

Follow the "Conducting Endangered Resources Reviews: A Step-by-Step Guide for Wisconsin DNR Staff" document (summarized below) to determine if cricket frogs will be impacted by a project (WDNR 2012):



Avoidance Measures

The following measures are specific actions typically required by DNR to avoid take (mortality) of state endangered or threatened species per Wisconsin's Endangered Species Law (s. 29.604, Wis. Stats.). These guidelines are not mandatory for non-listed species (e.g., special concern species) unless required by a permit, authorization or approval.

According to Wisconsin's Endangered Species Law (s. 29.604, Wis. Stats.), it is illegal to take, transport, possess, process, or sell any wild animal on the Wisconsin Endangered and Threatened Species List (ch. NR 27, Wis. Admin. Code). Take of an animal is defined as shooting, shooting at, pursuing, hunting, catching or killing.

If *Screening Procedures* above indicate that avoidance measures are required for a project, follow the measures below. If you have not yet read through *Screening Procedures*, please review them first to determine if avoidance measures are necessary for the project.

1. The simplest and preferred method to avoid take of Blanchard's cricket frogs is to avoid directly impacting individuals, known cricket frog locations, or areas of suitable habitat (described above in the "Ecology" and "Habitat" sections and in *Screening Procedures*).

2. If suitable habitat cannot be avoided, follow these time-of-year restrictions to avoid take:
   - Conduct work in non-overwintering areas (uplands further than 15 m [50 ft] of standing water) during the cricket frog's inactive season (typically December 1-March 4).

3. If impacts cannot be avoided but the No/Low Impact Broad Incidental Take Permit/Authorization (BITP/A; http://dnr.wi.gov/topic/ERReview/ITNoLowImpact.html) can be followed, the project is covered for any unintentional take that may occur.

4. If impacts cannot be avoided during restoration or management activities, but the Grassland and Savanna Protocols can be followed (http://dnr.wi.gov/topic/ERReview/ItGrasslands.html), the project is covered for any unintentional take that may occur.

5. If impacts cannot be avoided but the Common Activities Broad Incidental Take Permit/Authorization (BITP/A; http://dnr.wi.gov/topic/ERReview/ITCommonActivities.html) can be followed, the project is covered for any unintentional take that may occur.

6. If cricket frog impacts cannot be avoided or covered by the No/Low Impact BITP/A, Grassland and Savanna Protocols, or Common Activities BITP/A, please contact the Natural Heritage Conservation Incidental Take Coordinator (see *Contact Information*) to discuss possible project-specific avoidance measures. If take cannot be avoided, an Incidental Take Permit or Authorization is necessary.

Additional Information

References

Badje, A. F., T. J. Brandt, T. L. Bergeson, R. A. Paloski, J. M. Kapfer and G. W. Schuurman. 2016. Blanchard's cricket frog *Acris blanchardi* overwintering ecology in southwestern Wisconsin. Herpetological Conservation and Biology 11:101-111.

Beasley, V. R., S. A. Faeh, B. Wikoff, C. Staehle, J. Eisold, D. Nichols, R. Cole, A. M. Schotthoefer, M. Greenwell, and L. E. Brown. 2005. Risk factors and declines in northern cricket frogs (Acris crepitans). Pages 75–86 *in* Lannoo M. Amphibian Declines. University of California Press, Berkley and Los Angeles, California, USA.

Beebee, T. J. C. 1995. Amphibian breeding and climate change. Nature 374: 219-220.

Blaustein, A. R., L. K. Belden, D. H. Olson, D. M. Green, T. L. Root, and J. M. Kiesecker. 2001. Amphibian breeding and climate change. Conservation Biology 15:1804-1809.

Bosch, J., L. M. Carrascal, L. Durán, S. Walker, and M. C. Fisher. 2007. Climate change and outbreaks of amphibian chytridiomycosis in a montane area of Central Spain: is there a link? Proceedings of the Royal Society B 274:253-260.

Burkett, R. D. 1984. An ecological study of the cricket frog, *Acris crepitans*. Pages 89-103 *in* Seigel, R. A., L. E. Hunt, J. L. Knight, L. Malaret, and N.L. Zuschlag (eds.). Vertebrate Ecology and Systematics. Museum of Natural History, University of Kansas, Lawrence, Kansas, USA.

Carey, C., and M. A. Alexander. 2003. Climate change and amphibian declines: is there a link? Diversity and Distributions 9: 111-121.

Carpenter, C. C. 1952. Comparative ecology of the common garter snake (*Thamnophis s. sirtalis*), the ribbon snake (*Thamnophis s. sauritus*), and Butler's garter snake (*Thamnophis butleri*) in mixed populations. Ecological Monographs 22:235-258.

Casper, G. S. 1996. Geographic distributions of the amphibians and reptiles of Wisconsin. Milwaukee Public Museum, Milwaukee, Wisconsin, USA.

Christoffel, R., R. Hay, and M. Wolfgram. 2001. Amphibians of Wisconsin. Wisconsin Department of Natural Resources, Madison, Wisconsin, USA.

Conant, R., and J. T. Collins. 1998. A field guide to reptiles and amphibians of Eastern and Central North America. Houghton Mifflin Company, Boston, Massachusetts, USA.

Corn, P. S. 2005. Climate change and amphibians. Animal Biodiversity and Conservation 28:59-67.

Dickson, N. J. 2002. The natural history and possible extirpation of Blanchard's cricket frog, *Acris crepitans blanchardi*, in West Virginia. Master's Thesis. Department of Biological Sciences, Marshall University, Huntington, West Virginia, USA.

Gamble, T., P. B. Berendzen, H. B. Shaffer, D. E. Starkey, and A. M. Simons. 2008. Species limits and phylogeography of North American cricket frogs (*Acris*: Hylidae). Molecular Phylogenetics and Evolution 48:112-125.

Garman, H. 1892. A synopsis of the reptiles and amphibians of Illinois. Illinois State Laboratory of Natural History Bulletin 3:215-388.

Gibbs, J. P., and A. R. Breisch. 2001. Climate warming and calling phenology of frogs near Ithaca, New York, 1900-1999. Conservation Biology 15:1175-1178.

Gray, R. H. 1971. Fall activity and overwintering of the cricket frog (*Acris crepitans)* in central Illinois. Copeia 4:748-749.

Gray, R. H. 1983. Seasonal, annual and geographic variation in color morph frequencies of the cricket frog, *Acris crepitans*, in Illinois. Copeia 2:300-311.

Gray, R. H., L. E. Brown, and L. Blackburn. 2005. *Acris crepitans* Baird (Northern Cricket Frog). Pages 441-443 *in* Lannoo M. Amphibian Declines. University of California Press, Berkley and Los Angeles, California, USA.

Greenwell, M., V. Beasley, and L. E. Brown. 1996. Cricket frog research: the mysterious decline of the cricket frog. Aquaticus 26:48-54.

Harding, J. H. 1997. Amphibians and reptiles of the Great Lakes Region. University of Michigan Press, Ann Arbor, Michigan, USA.

Irwin, J. T. 2005. Overwintering in northern cricket frogs (*Acris crepitans*). Pages 55-58. *in* Lannoo M. Amphibian Declines. University of California Press, Berkley and Los Angeles, California, USA.

Johnson, B. K., and J. L. Christiansen. 1976 The food and food habits of Blanchard's cricket frog, *Acris crepitans blanchardi* (Amphibia, Anura, Hylidae), in Iowa. Journal of Herpetology 10:63-74.

Johnson, L. M. 1991. Growth and development of larval northern cricket frogs, *Acris crepitans*, in relation to phytoplankton abundance. Freshwater Biology 25:51-60.

Kingsbury, B., and J. Gibson. 2002. Habitat management guidelines for amphibians and reptiles of the Midwest. Partners in Amphibian and Reptile Conservation.

Korb, R. M. 2001. Wisconsin frogs: places to hear frogs and toads near our urban areas. Northeastern Audubon Society, Inc., Green Bay, Wisconsin, USA.

Labanick, G. M. 1976. Prey availability, consumption and selection in the cricket frog, *Acris crepitans* (Amphibia, Anura, Hylidae). Journal of Herpetology 10:293-298.

Irwin, J. T., J. P. Costanzo, and R. E. Lee Jr. 1999. Terrestrial hibernation in the northern cricket frog, *Acris crepitans*. Canadian Journal of Zoology 77:1240-1246.

Malcolm L. McCallum, 2010. Future climate change spells catastrophe for Blanchard's cricket frog, *Acris blanchardi* (Amphibia: Anura: Hylidae). Acta Herpetologica 5(1): 119-130.

McCallum, M.L., McCallum, J.L., Trauth, S.E. 2009. Prediction of climate change impacts on the growth and size at maturity of three-toed box turtles. Amphibia-Reptilia 30: 259-264.

Oldfield, B., and J. J. Moriarty. 1994. Amphibians and reptiles native to Minnesota. University of Minnesota Press, Minneapolis, Minnesota, USA.

Paloski, R. A., T. L. E. Bergeson, M. Mossman, and R. Hay. 2006. Wisconsin frog and toad survey manual. PUB-ER-649. Bureau of Endangered Resources, Wisconsin Department of Natural Resources, Madison, Wisconsin, USA. <http://wiatri.net/inventory/frogtoadsurvey/Volunteer/manual.cfm>

Parmelee, J. R., M. G. Knutson, and J. E. Lyon. 2002. A field guide to amphibian larvae and eggs of Minnesota, Wisconsin, and Iowa. Information and Technology Report USGS/BRD/ITR-2002-0004. United States Geological Survey, Biological Resources Division, Washington, District of Columbia, USA.

Perrill, S. A., and W. J. Shepherd. 1989. Spatial distribution and male-male communication in the northern cricket frog, *Acris crepitans blanchardi*. Journal of Herpetology 23:237-243.

Pope, C. H. 1944. Amphibians and reptiles of the Chicago area. Chicago Natural History Museum Press, Chicago, Illinois, USA.

Pounds, J. A., and M. L. Crump. 1994. Amphibian declines and climate disturbance: the case of the golden toad and the harlequin frog. Conservation Biology 8:72-85.

Pyburn, W. F. 1958. Size and movement of a local population of cricket frogs (*Acris crepitans*). Texas Journal of Science 10:325-342.

Sheldon, A. B. 2006. Amphibians and reptiles of the north woods. Kollath+Stensaas Publishing, Duluth, Minnesota, USA.

Tekiela, S. 2004. Reptiles and amphibians of Wisconsin field guide. Adventure Publications, Cambridge, Minnesota, USA.

Vogt, R. C. 1981. Natural history of amphibians and reptiles of Wisconsin. Milwaukee Public Museum, Milwaukee, Wisconsin, USA.

Walker, C. F. 1946. The amphibians of Ohio. Part 1. The Frogs and Toads. Ohio State Archaeological and Historical Society, Columbus, Ohio, USA.

Whitfield, S. M., K. E. Bell, T. Philippi, M. Sasa, F. Bolaños, G. Chaves, J. M. Savage, and M. A. Donnelly. 2007. Amphibian and reptile declines over 35 years at La Selva, Costa Rica. Proceedings of the National Academy of Sciences 104:8352-8356.

WDNR [Wisconsin Department of Natural Resources]. 2005. Wisconsin's Strategy for Wildlife Species of Greatest Conservation Need: A State Wildlife Action Plan. Madison, Wisconsin, USA. <http://dnr.wi.gov, key word "Wildlife Action Plan">

WDNR [Wisconsin Department of Natural Resources]. 2009. Wisconsin wildlife action plan species profile: Northern Cricket Frog. (accessed May 27, 2012). Madison, Wisconsin, USA. <material now available on the Natural Heritage Conservation species Web page: http://dnr.wi.gov, key word "biodiversity">

WDNR [Wisconsin Department of Natural Resources]. 2012. Conducting Endangered Resources Reviews: A Step-by-Step Guide for Wisconsin DNR Staff. Bureau of Endangered Resources. Wisconsin Department of Natural Resources, Madison, Wisconsin.

WDNR [Wisconsin Department of Natural Resources]. 2013. Natural Heritage Inventory database. (accessed October 4, 2012).

WICCI [Wisconsin Initiative on Climate Change Impacts]. 2011. Wisconsin's Changing Climate: Impacts and Adaptation. Nelson Institute for Environmental Studies, University of Wisconsin-Madison and the Wisconsin Department of Natural Resources, Madison, Wisconsin, USA. <http://www.wicci.wisc.edu/report/2011_WICCI-Report.pdf>

Wright, A. H. and A. A. Wright. 1949. Handbook of the frogs and toads of the United States and Canada. Third edition. Comstock Publishing Associates, Ithaca, New York, USA.

Linked Websites:

- Incidental Take Permit and Authorization: <http://dnr.wi.gov, key work "incidental take overview">
- Natural Communities of Wisconsin: <http://dnr.wi.gov, key word "natural communities">
- Rare Animal Field Report Form: <http://dnr.wi.gov, key word "rare animal field report form">
- Wisconsin Endangered and Threatened Species: <http:dnr.wi.gov, key word "endangered resources">
- Wisconsin Endangered and Threatened Species Permit: <http://dnr.wi.gov, key work "endangered species permit">
- Wisconsin Initiative on Climate Change Impacts: <http://www.wicci.wisc.edu/>
- Wisconsin Natural Heritage Inventory Working List: <http://dnr.wi.gov, key word "Natural Heritage Working List">
- Wisconsin's Wildlife Action Plan: <http://dnr.wi.gov, key word "Wildlife Action Plan">

Funding

- USFWS State Wildlife Grants Program – <http://wsfrprograms.fws.gov/subpages/grantprograms/swg/swg.htm>
- Sadie Nolan Amphibian and Reptile Education and Conservation Memorial Fund
- Wisconsin Natural Heritage Conservation Fund

Contact Information (Wisconsin DNR Species Expert for cricket frogs)

- Refer to the Amphibians contact on the Rare Species and Natural Community Expert List

Contact Information

- *Endangered Resources Review Program:* WI Department of Natural Resources, Bureau of Natural Heritage Conservation (DNRERReview@wisconsin.gov)
- *Incidental Take Coordinator:* Rori Paloski, WI Department of Natural Resources, Bureau of Natural Heritage Conservation (608-264-6040, rori.paloski@wi.gov)

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