



# Kirtland's Warbler Recovery Team

JOHN BYELICH, Leader  
Mio, Michigan

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MICHAEL E. DeCAPITA  
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February 21, 1985

Mr. Charles J. Guenther, Chief  
Wildlife Division  
Department of Natural Resources  
Box 30028  
Lansing, Michigan 48909

Dear Mr. Guenther:

We understand that the U. S. Fish & Wildlife Service (USFWS) shortly will be approaching its approved Kirtland's warbler land acquisition ceiling of 4,500 acres. The "Management Plan for Kirtland's Warbler Habitat in Michigan," jointly approved in 1981 by the U. S. Forest Service and Michigan Department of Natural Resources, established a goal to acquire 7,661 acres of land by the State to achieve the objectives of the Recovery Plan.

A number of high priority tracts have not been acquired due to unwilling sellers. These tracts were anticipated to produce high nesting density habitat. We believe that the USFWS's 4,500 acreage ceiling should be raised to allow sufficient latitude to acquire all the parcels currently designated as priority acquisition by the Recovery Plan.

Our recommendation is that the Michigan Department of Natural Resources request the USFWS to raise the acreage ceiling and to continue the acquisition of priority tracts detailed in the Plan. A precise acreage goal can be determined by your staff based upon the remaining unacquired priority tracts.

Sincerely,

John Byelich, Leader  
Kirtland's Warbler Recovery Team

JB:sp



United States  
Department of  
Agriculture

Forest  
Service

North Central Forest Experiment Station  
1992 Folwell Avenue  
St. Paul, Minnesota 55108

Reply to: 1630

Date: July 25, 1985

Mr. Harold Mayfield  
9235 River Road  
Waterville, OH 43566

Dear Harold:

Jack Hayes and I have finally completed a review draft of our paper on KW pairing success in different habitats. We concluded that there is a highly significant difference in the time necessary to determine mated males in poorer habitat, although we do not presume that all of these males were in fact unmated for the entire breeding season. We acknowledge that our search time was adequate only for habitat comparisons, and suggest that future researchers extend search time farther out on the curve of diminishing returns.

Our observation and tracking times may seem to be marginal, but that is because we avoided working at times when singing was poor, or in habitat where visibility was poor. For example, if the ratio of track time to observation time fell below 20%, it is conceivable that one could spend 7-8 hours or more to find a female KW. Our conclusions do not depend as much on the accuracy of the pairing determination as they do on the difference in proportion of "unmated" males in each habitat.

We would like to ask you to review this paper if you have a chance in the next month or so. I also wish to thank you for your review of the "Factors Limiting" paper last year. It has been accepted by Amer. Midl. Nat. and should appear in print next year. If you are unable to review the "Pairing Success" paper you are welcome to keep it for your information.

Sincerely,

JOHN R. PROBST  
Wildlife Biologist

Enclosure



- 2 -

Hayfield

August 29, 1985

John Probst  
North-Central Forest Experiment Station  
Forest Service - U. S. Dept. of Agriculture  
1992 Folwell Avenue  
St. Paul, Minnesota 55108

Dear John:

I am embarrassed. Your manuscript dated July 25 reached me yesterday. I moved to a new address last October, and the manuscript was sent third class and consequently was not forwarded in the usual manner. Indeed, it was almost by chance that I got it at all. So my reply may be slow, but I am giving it immediate attention. I know how important a response is to an author.

I congratulate you on this work. It is easily the best of your efforts to date. My comments are all minor in nature and mostly written by hand in the margins.

I am a little concerned about the number of females that may be missed in a modest amount of search time, but I concede this may be insignificant in the total. In my early field work we (two or three men) spent virtually the entire nesting season in one colony of a dozen or so birds (males). We came to know that area like the palm of your hands, and could identify each male (all were color-banded) by differences in song alone. Sometimes we were baffled for a considerable time in finding the female during incubation. My information on this point is anecdotal, and I cannot express the matter in measurements, but I recall one instance where we did not find the female for several days and had classified the male as unmated until we finally found her. In that instance the territory was long and rather open (Open areas make for larger territories), and the male spent nearly all his time in one part of it, which we thought was his whole territory, until we saw him fly in a high flight several hundred yards to a different area, where we found the female incubating. We would never have found that pairing if we had not been "living" on the tract.

On page 9 you mention the possibility that males cling to an area after it is over-mature and no females use it. I mentioned this (1960:53), having followed two colonies from their prime right out of existence. In both instances the final year had one or two singing males without mates. Not much of a statistical sample but confirmatory! I do not see where Walkinshaw addressed this question.

The question of polygyny is intriguing. Radabaugh's amazing proportion in one or two years and some of my own and Walkinshaw's data suggest (but do not prove) that this is a phenomenon that is not at all common but may occur under special circumstances.

North Central Forest Experiment Station  
1992 Edgewood Avenue

I wonder if you have ready access to Nolan's monograph on the Prairie Warbler. I hope so. It provides by far the most complete a relevant material for comparison with the Kirtland's Warbler. It is the first book I turn to when I want to compare other related birds to the Kirtland. After writing this in the margin in a couple of places, I discovered that you gave the work as a reference, but I was surprised it did not crop up more frequently in the text. This comment probably reaches you too late to be very helpful now.

Going back to the third paragraph of this letter, I hope you can talk to Nick Cuthbert about this matter some time. If we have all of these unmated males, then we must have a lot of unmated females somewhere or a higher mortality rate among females. I realize you considered this matter in your paper, but it is a puzzling matter. Nolan felt that the sex ratio in Prairie Warblers was about even. Perhaps unmated females are so difficult to find that we are led to believe they are nonexistent. Or, on the other hand, perhaps there are no unmated females except those that stray in migration. A difficult question!

I am sure you will have little difficulty in getting this manuscript published--I hope in the Auk or Wilson Bulletin, where the bird people have easiest access to it.

Good luck.

Sincerely,

*John R. Probst*  
JOHN R. PROBST  
Wildlife Biologist

Enclosure



Mayfield



# Kirtland's Warbler Recovery Team

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Mio, Michigan

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Mich. Dept. of  
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MICHAEL E. DeCAPITA  
U.S. Fish and  
Wildlife Service

July 26, 1985

TO: Recovery Team Members  
FROM: John Byelich, Leader  
SUBJECT: Kirtland's Warbler Sighting

Just a note to let you know that Paul Aird has reported that he located a singing male Kirtland's Warbler in southern Ontario. It was found in the 1946 burn, the cover was jack pine on a rock formation base. The cover is similar to the location of the bird found in Pötawawa several years ago. No more details--exact location is confidential. We may want to check this area again.

JB:sp



# United States Department of the Interior

FISH AND WILDLIFE SERVICE

Federal Building, Fort Snelling  
Twin Cities, Minnesota 55111

IN REPLY REFER TO:

AF/SE

July 19, 1985

Mr. Harold F. Mayfield  
1162 Nannette Drive  
Toledo, Ohio 43614

Dear Mr. Mayfield:

The attached represents a preliminary proposal to initiate long-term research on the Mack Lake burn area. The U.S. Fish and Wildlife Service (FWS) supports this research effort and will be providing start-up funding via the transfer and reobligation of section 6 funds left over from this past spring's jack pine planting work. The regional endangered species office is also seeking long-term research funding, to commence in fiscal year 1988. As a substantial portion of this study involves vegetation analysis, it is our hope that FWS and the U. S. Forest Service (FS) will be jointly funding this research from FY-85 until its completion.

It is our understanding that the Mack Lake Research Committee will develop a more detailed proposal after they receive comments on this preliminary proposal from FWS, FS, the Kirtland's Warbler Recovery Team, and the Michigan DNR. At this point we have only two comments, but we feel rather strongly about both points.

1. The proposal states that fledgling and immatures will be color banded. We believe that any adults captured in mist nets should also be color banded. Experienced banders generally agree that the greatest risk of injury or mortality to small passerines comes from the netting and removal of the birds rather than from the banding and the subsequent carrying of the bands. Therefore, any incidentally captured adult warblers have already experienced the bulk of the risk by the time they are removed from the net. Color banding those birds is thought to add little additional risk, but will add to the potential for gathering additional data, both on the wintering ground and on the breeding areas at and near Mack Lake.
2. The proposal states that the warblers will be color banded, but also states that sonograms will be developed as a means of identifying individual singing males. We infer from this that warblers will not be banded with a combination of color bands which will allow visual identification of individuals. We disagree with this and believe that

the color banding scheme being used by Craig Faanes should be used for the color banding of any Kirtland's warblers. Experienced banders generally view banding of small passerines, with one aluminum band and up to three plastic bands, as placing little risk of injury or mortality on the bird, if done by a properly trained individual. We believe this nearly negligible risk is justified by the additional data that is potentially available if individual warblers can be identified by sight. Our reasoning is as follows:

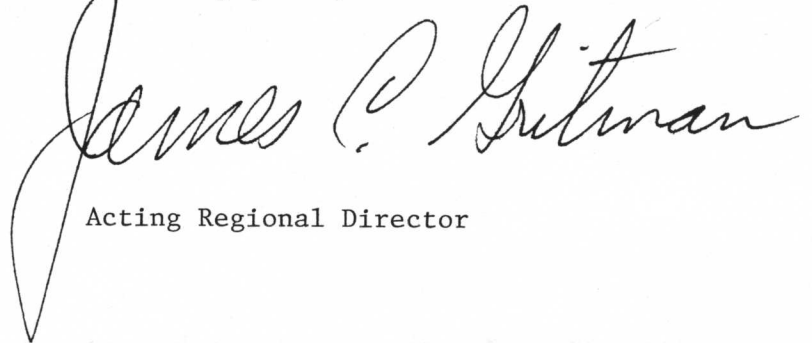
- Sonograms have not yet been proven reliable to identify individual Kirtland's warblers.
- Sonograms require bulky equipment and do not lend themselves to quick field identifications of individuals, e.g., to determine if a bird warrants immediate pursuit to gain additional data.
- Individually unique color bands will allow identification of females, floaters, and other non-singing males. Sonograms are useful only for singing males, a subset of the Kirtland's warbler population. We also need information on the rest of the population to see how they are involved in pioneering new habitat, especially females, non-territorial floaters, and any nonbreeding males.
- Subsequent sightings of sonogrammed males by persons who are not equipped with tape recorders could not be linked to individual birds, as would be possible with uniquely marked birds.
- Uniquely marked warblers could add much to our knowledge of behavior on the wintering ground, e.g., the extent of nomadic behavior, geographic and habitat preferences of individuals, and stability of habitat preferences throughout the period. Sonograms are not usable during this non-singing period.

We believe that sonograms do have potential merit as a backup method, for example, in identifying a singing male who can not be seen or has lost one or more colored bands. For this reason, we support the further development and refinement of sonographic techniques, but not as a substitute for uniquely color banding individual Kirtland's warblers. Sonogram work should be viewed as a low priority task, and should be considered one of the more expendable activities if funding is limited.

These comments are being furnished directly to Craig Faanes, Jerry Weinrich, and John Probst of the Mack Lake Research Committee. We hope that comments from the team members will be promptly submitted to that committee so the field work can begin shortly. If you have questions regarding the use of color bands

we suggest you contact Chandler Robbins (Patuxent Wildlife Research Center, 301-498-7281) and Gene Morton (Smithsonian Institution, Research Division, 202-673-4828). Both of these individuals have extensive experience with color banding passerines, and believe that our two suggested changes are desirable and should result in little or no additional risk to individual Kirtland's warblers.

Sincerely yours,



Acting Regional Director

Attachment

cc: Bob Hess, MI DNR  
Regional Forester,  
U.S. Forest Service



Proposal to Study:

Habitat Utilization by Kirtland's Warbler - Mack Lake Burn,  
Oscoda County, Michigan

1. Need:

Although the Kirtland's warbler has been the subject of considerable scientific study, most previous research has concentrated on the warbler's reproductive biology. Little quantitative information on habitat requirements has been published. The Kirtland's Warbler Recovery Plan (Byelich, et al. 1976) identified the availability of nesting habitat as a major factor limiting the population of this species, and considerable effort and funding has been expended in recent years to provide additional nesting habitat.

Large acreages of new potential nesting habitat resulting from the May 5, 1980, 25,000 acre wildfire around Mack Lake (Oscoda County, Michigan) provides a unique opportunity for study of the habitat requirements of Kirtland's warbler. Because of the location, amount, and age of the jack pine regeneration in this wildfire area, and the status of other habitat in nearby counties, it is possible that a high percentage of the Kirtland's warbler population will be located in this area within a few years.

2. Objectives:

- A. Determine the bounds of suitability of reproductive habitat for the Kirtland's warbler.

- a) Refine habitat management guidelines concerning planting densities, soil types, ground cover, disturbance, stand size, hardwood component, and other factors relative to warbler use of the Mack Lake Area.
  - B) Determine optimal characteristics for Kirtland's warbler habitat again as demonstrated by warbler use of the Mack Lake Area.
  - C) Relate site fidelity, dispersal from natal grounds, and mating status to changes in habitat characteristics through time.
3. Expected Results and Benefits:
- A) Determine what constitutes breeding habitat with highest density of mated warblers.
  - B) Prepare alternative management schemes that accommodate different regeneration methods and geographical locations to insure adequate quantities of suitable habitat.
  - C) Develop cost-effective management alternatives that minimize regeneration costs and optimize benefits to timber production, wildlife, and recreational uses.
4. Approach:
- Habitat Analysis
- A) To the extent possible, integrate existing vegetative data for the Mack Lake Area and other areas used by Kirtland's warblers in the past.
  - B) Beginning as soon as possible, sample and quantitatively describe vegetative composition of the Mack Lake Wildfire Area.

- C) Continue to quantitatively describe vegetative composition at the Mack Lake Area (and certain other areas of warbler habitat) through the period which the Mack Lake Wildfire Area is occupied by Kirtland's.

Species Responses

- A) Color band fledglings and immatures (July to September) in other occupied habitats as soon as possible; shift emphasis to Mack Lake Wildfire Area as population increases.
- B) Determine proportion of banded birds from each of several other areas which colonize the Mack Lake Area.
- C) Determine matedness (unmated, mated, polygynous) of banded and unbanded birds at Mack Lake and other areas.
- D) Develop use of sonograms of singing male warblers as a means for individual identification.

5. Location:

Within present known nesting range of Kirtland's warbler. Research will be concentrated in the Mack Lake Wildfire Area.

6. Estimated Manpower and Costs:

Salaries and wages (two biologists, eight temporaries)	\$65,000
Travel	7,000
Equipment	2,000
Other	1,000

Prepared by:

John Probst, U. S. Forest Service

Craig Faanes, U. S. Fish & Wildlife Service

Jerry Weinrich, Michigan Department of Natural Resources



Wes Jones

ROUTE 1, BOX 37  
SHELL LAKE, WI 54871  
715-468-2038

*plus  
7/23*

July 21, 1985

Regional Director  
Fish and Wildlife Service  
Federal Building, Fort Snelling  
Twin Cities, MN 55111

Dear Harvey,

In reference to your letter of July 19 transmitting a proposal to initiate long-term research on Kirtland's warbler habitat resulting from the Mack Lake Burn, thank you for the opportunity to comment.

I'm sure I am only echoing the feeling of other Kirtland's Warbler Recovery Team members when I stress that this wildfire has created an opportunity for learning more about Kirtland's warbler habitat than will ever be equalled in the future. This fire was tragic in the loss of life and extensive property damage that occurred, but it brought about some significant improvements in management attitudes, and in fire prevention and control practices. This short-term opportunity must not be wasted: it is heartening that the FWS and FS will be cooperators in the project.

I have reviewed the research proposal and find that it is a broad-based outline of future guidelines. A lack of detail makes it very difficult for me to make much specific comment beyond endorsement -- a problem which you appeared to have also in your transmittal when you concentrated on some details of warbler banding and the use of sonograms. I do have some input to offer in this regard.

I have no disagreement with your position on the low risk to Kirtland's warbler caused by color banding. I cannot, however, see a need for identifying individuals by multiple color banding; in fact, I can visualize that multiple color bands may create more confusion in identification under field conditions that may be less than ideal. In actuality, in this study the designation of an individual really is significant only in respect to the colony in which it is a cohort. I feel that more reliable and more voluminous observation reports can be obtained by the use of single anodized bands applied in the nesting range. Each nesting colony to be studied can be assigned a specific color. Time separation (i.e. 1985 and 1986 bandings) can also be gained simply by the assignment of a specific leg to be banded during the time period.

I am assuming a continuation of winter habitat searches for Kirtland's warbler. If so, a corollary of the above would be the application of one plain numbered band on a specific leg plus one colored band on the opposite leg -- a color specific to each of the wintering sites surveyed.

I have not had contact with Recovery Team members since the last meeting; nothing which would indicate to me the reason for the proposal naming "fledglings and immatures" for banding. One valid reason, however, would be the fact that earlier research has clearly established that colonies in new habitat are derived from this age group, and that the veteran breeders remain within their colony until death. Possibly the thought was to save a limited multiple-band color coding assignment for those birds more likely to yield valuable data. If my suggestion above is utilized, I can see no reason for not banding these incidentally-captured Kirtland's warbler in an identical manner.

It is unfortunate that the sonogram technique has not developed to a point of practical application; it is my impression that the data already collected could be most of the foundation required for summary and conclusion by an aggressive researcher. If there are manpower and funding limitations, I concur that this would be a low-priority task. I feel also that a matedness study is in the same category. Emphasis on other aspects of the proposal would appear to me to have a more favorable cost/benefit ratio under the conditions of this unique post-wildfire situation.

Again, I appreciate the chance to comment. I am not sending this to Committee members, principally because proper addresses are not at hand. Would you please distribute copies of this as appropriate, including also one to Kirtland's Warbler Team Leader Byelich.

Thank you.

Sincerely,

Wes Jones

August 7, 1985

Regional Director  
U. S. Fish and Wildlife Service  
Federal Building, Fort Snelling  
Twin Cities, Minnesota 55111

Re: Kirtlands's Warbler

Dear Mr. Gritman:

I am heartily in favor of making the most of the special opportunity for research in the Mack Lake Burn of Michigan.

I believe the person actually planning and doing the research should select the methods he needs and we should give him a free hand unless we have compelling reasons to doubt the soundness of his approach. These matters are hard to judge from a distance without detailed knowledge of the steps to be taken.

Sincerely,

Kirtland's Warbler Recovery Team Member.