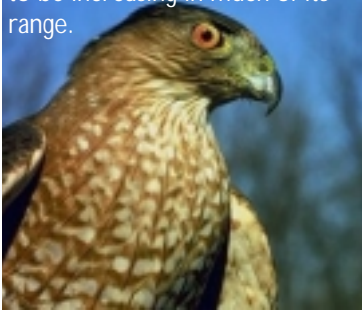


# Eyes on the Sky

## The Raptor Population Index: Taking Flight



Cooper's Hawk -- this medium-sized woodland raptor appears to be increasing in much of its range.



Northern Harrier -- hawk counts suggest that this species is declining in eastern regions



Peregrine Falcon -- now nesting again in much of its former range in the east after years of captive breeding and reintroduction programs



## Working together for Raptors

Over the past year, a partnership has been formed bringing together three leading raptor research organizations: The Hawk Migration Association of North America (HMANA), Hawk Mountain Sanctuary Association (HMSA) and HawkWatch International (HWI). Their common goal is to use counts of migrating hawks from an extensive network of watch sites across North and Central America to assess the population status of these important biological indicators of environmental health. The specific objectives of this **Raptor Population Index (RPI)** program are to (1) produce scientifically defensible indices of annual abundance and trends for each species of migratory raptor from as many count sites as possible; (2) provide frequently updated assessments of the status of each species; and (3) make those results available widely, i.e. to participating count sites, the scientific community, conservation agencies and the public.

The purpose of the RPI is to provide a sound basis for conservation of all species of migratory raptors through biennial assessments of their population status at regional, national and continental scales.

The three partners have started to implement a 3-year pilot project, designed to launch this long-term raptor population monitoring program. A management committee, representing all partners, and a science advisory committee have been appointed. In June 2004 the project was awarded an \$86,100 grant from the National Fish and Wildlife Foundation (NFWF) to fund the project's first year. This grant must be matched 2:1 from non-government sources before the project can be fully implemented.

## What are Migratory Raptors?

The group of birds known as diurnal raptors are birds of prey that are sometimes referred to simply as "hawks." They comprise eagles, falcons, ospreys, vultures, kites and harriers as well as hawks. Among thirty-two species that occur regularly in North America, at least twenty are migratory – moving seasonally to exploit food resources. They range in size from the diminutive American Kestrel (not much bigger than a backyard robin) to the massive Golden Eagle with a wingspan of more than six and a half feet.

Many of these birds travel long distances from their breeding sites to wintering areas. The Swainson's Hawk, for example, breeds as far north as Alberta, Canada and migrates each fall all the way to the grasslands of South America, many as far as Argentina.

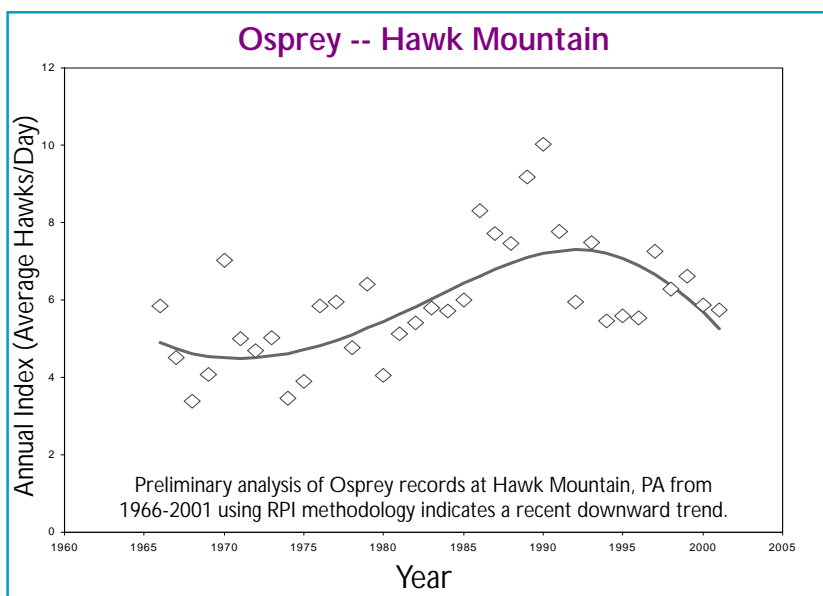
During these annual migrations they often gather in huge numbers in passage along coastlines and mountain ridges where geography and local weather interact to bring them together. At these special locations, all across North America, biologists, citizen scientists, birdwatchers, and the interested public also gather to identify and count these raptors or simply to enjoy one of nature's most magnificent spectacles.



## Why should we be concerned about Raptors?

Raptors are particularly sensitive indicators of environmental health and change because they inhabit most ecosystem types, occupy large home ranges, feed at the top of the food pyramid, and are highly sensitive to chemical contamination and other forms of human-caused disturbance.

Moreover, through their majesty and mastery of the air, birds of prey enrich the lives of those who see them. Hawk migrations attract a broad array of people, young and old, novice and expert alike, who find themselves drawn to mountain tops and coastlines each spring and fall to witness one of the great spectacles of the natural world – raptor migration. It is our responsibility to ensure that these opportunities remain available to future generations.



## Project Purpose & Need

Accurate knowledge of population status and change is fundamental to wildlife conservation. Lack of reliable information on populations of many raptors forms a conspicuous gap in North American bird monitoring. Counts of migrating raptors may be the key to filling that gap.

The large volume of potentially useful data on raptor populations, collected over the years at numerous hawk watch sites, has never been

brought together in a coordinated scheme to provide timely information on raptor population trends. Now is the time to use those data to understand what is happening on a broad scale.

The primary purpose of RPI is to establish a permanent, continent-wide monitoring program based on raptors counted regularly and consistently at as many sites as possible.

Biologists, citizen scientists, birdwatchers, and the interested public gather at migration sites to identify and count raptors or simply to enjoy one of nature's most magnificent spectacles.



Photo: Bill Brown, Niagara Peninsula Hawkwatch



Merlin -- a small falcon which appears to be expanding its range in the northeast



The RPI program will provide the first scientifically-based, regularly updated, hemispheric assessment of the status and trends of raptors counted in migration.

Sophisticated statistical analyses have been developed recently to allow relatively precise tracking of trends. Some examples of preliminary analyses are shown on these pages.

These and other results demonstrate how statistical analyses of trends in numbers of migrating hawks can elucidate the conservation status of these raptors. The goal of the RPI monitoring program is to apply this approach to a much larger number of counts across North America. Imagine the value of this level of analysis repeated at hundreds of sites across the continent and integrated to form regional and continental status assessments.

## The RPI Vision

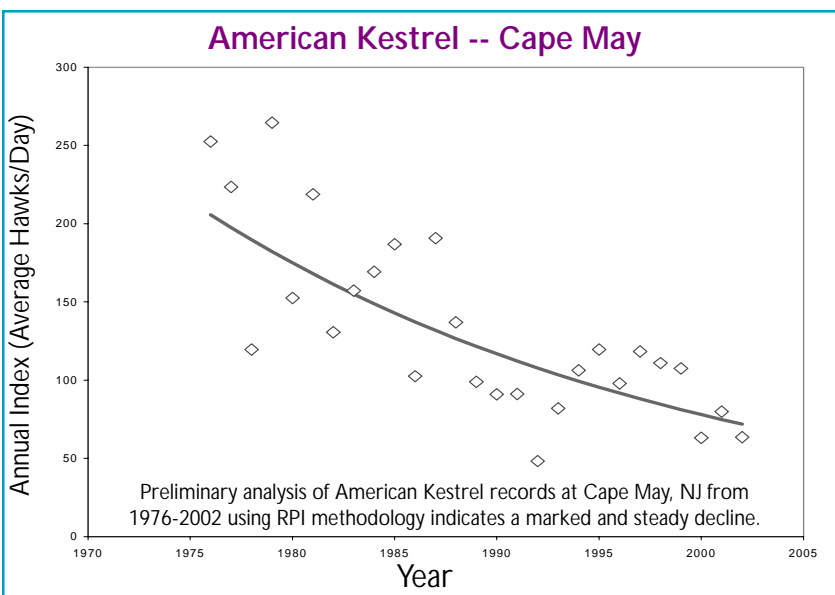
The vision of the RPI partners is to contribute to effective conservation of migratory raptors through continent-wide long-term monitoring of raptor migration, scientifically sound assessments of population status, and public outreach and education. Through conservation of raptors, communities of other species are also conserved and broader environmental issues are addressed.

This is not an entirely new vision. Daily counts of hawks passing Hawk Mountain in Pennsylvania have been conducted continuously since 1934. Since its formation in 1974, HMANA has served as a coordinating organization for hawk watches across the Americas, maintaining an archive of 75,000 standardized daily counts from over 100 sites in North America and Mexico. Likewise, HWI coordinates a network of 15 key raptor migration monitoring sites in 8 western states, Texas, Florida and Mexico, some with counts spanning more than 20 years. A central objective of all of these efforts is to track population change. Several local and regional

analyses have been completed, but the full potential of the existing data has never been tapped.

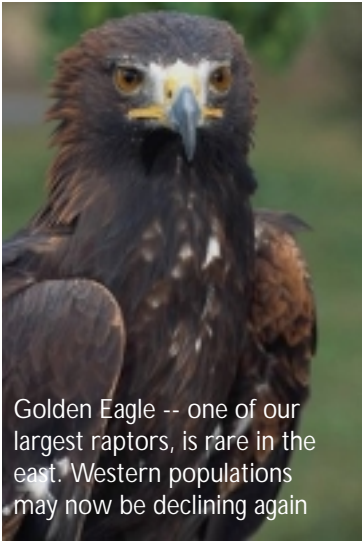
What is new is the creation of the RPI partnership among these three organizations with the single objective of working together to bring the vision to fruition: creating a permanent, ongoing program to continually monitor the status of migratory raptor populations and to put that information to work for raptor conservation.

American Kestrel -- our smallest diurnal raptor -- appears to be declining in the east





Northern Goshawk -- a large and aggressive woodland predator easily disturbed by forest fragmentation and development



Golden Eagle -- one of our largest raptors, is rare in the east. Western populations may now be declining again

## Corporate Sponsorship Opportunities

The RPI program is truly a cooperative venture. Not only is it a partnership among three organizations, it is also a partnership between hundreds of hawk counters (many volunteers) and the RPI project team. We seek to further broaden that partnership by including your organization as a corporate sponsor of RPI. Together we can do more to benefit the cause of raptor conservation than any of us can do alone.

You can support the RPI program at one of the following six corporate sponsorship levels\*:

Golden Eagle .....	\$50,000 +	
Osprey .....	\$25,000 - \$49,999	<i>*All contributions are tax deductible to the extent allowed by law.</i>
Goshawk .....	\$10,000 - \$24,999	
Peregrine .....	\$5,000 - \$9,999	
Broad-winged Hawk .....	\$1,000 - \$4,999	
Kestrel .....	\$250 - \$999	

*Contributions may be made payable to Hawk Mountain Sanctuary Association (RPI program) and sent to Hawk Mountain Sanctuary Association, 1700 Hawk Mountain Road, Kempton, PA 19529. If preferred, they may be made payable to one of the other two partner organizations (see contact information on next page).*

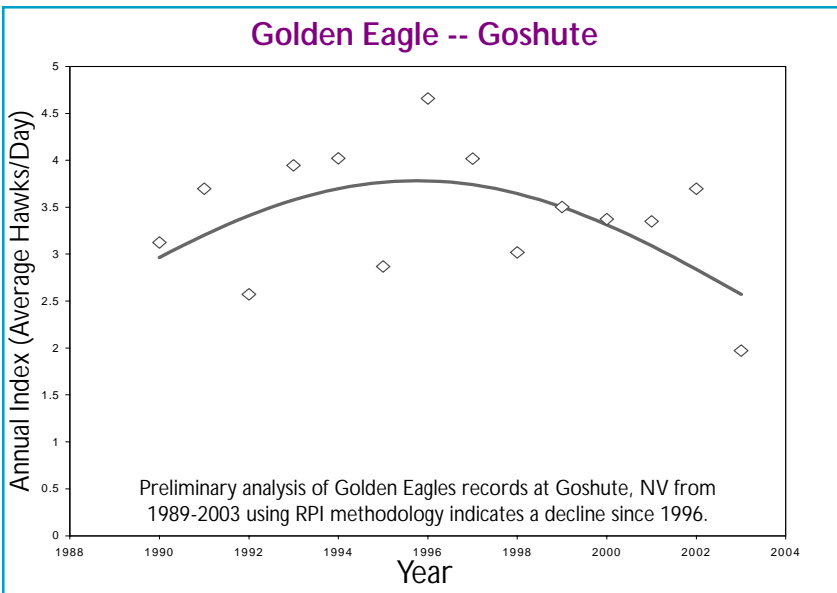
## Benefits of Corporate Sponsorship

By becoming an RPI Corporate Sponsor your organization will demonstrate its concern for the welfare of raptors and for ensuring that this natural wonder is preserved for the benefit and enjoyment of future generations. Moreover, the NFWF challenge grant guarantees that each \$1,000 donated now will be worth \$1,500 to the RPI project.

You will be part of an innovative program to provide reliable, scientifically sound and timely information on the status of raptor populations.

All RPI Corporate Sponsors will be recognized as supporters in RPI annual reports, on the RPI web site and, where appropriate, in other RPI publications.

Corporate Sponsors at the Peregrine level or above have the opportunity to have their logos on signs that we will make available for display at RPI hawk watch sites across the continent. The signs will indicate that the site is a participant in the RPI program and will identify major sponsors.



Bald Eagle -- has made a post-DDT recovery across the continent



## The RPI Project Team

### Management Committee

Keith L. Bildstein, Ph.D.,  
*Director of Conservation Science,  
Hawk Mountain Sanctuary Association*

Steve Hoffman, M.S.,  
*Executive Director,  
Predator Conservation Alliance*

David J.T. Hussell, Ph.D.,  
*Emeritus Scientist,  
Ontario Ministry of Natural Resources*

Kirk Moulton,  
*Past-Chair, Board of Directors,  
Hawk Migration Association  
of North America*

Jeff Smith, Ph.D.,  
*Science Director,  
HawkWatch International*

Will Weber, Ph.D.,  
*Chair, Board of Directors,  
Hawk Migration Association  
of North America*

### Science Advisory Committee

Jonathan Bart, Ph.D.,  
*Research Wildlife Biologist,  
USGS, Biological Resources Division*

Keith L. Bildstein, Ph.D.,

Charles M. Francis, Ph.D.,  
*Chief, Migratory Bird Populations,  
Canadian Wildlife Service*

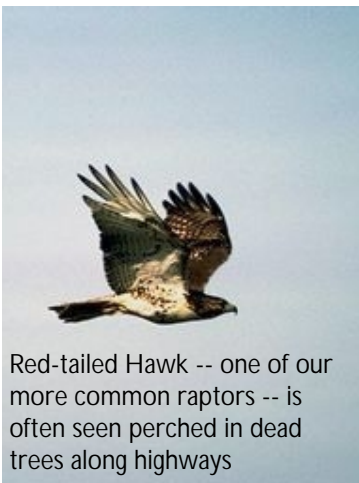
Mark R. Fuller, Ph.D.,  
*USGS, Biological Resources Division*

Laurie J. Goodrich, M.S.,  
*Senior Monitoring Biologist,  
Hawk Mountain Sanctuary  
Association*

David J. T. Hussell, Ph.D.

David Mizrahi, Ph.D.,  
*Vice President for Research,  
Cape May Bird Observatory*

Jeff Smith Ph.D.



Red-tailed Hawk -- one of our more common raptors -- is often seen perched in dead trees along highways

## RPI Project Contacts

Will Weber, Hawk Migration Association of North America,  
1120 Claire Circle, Ann Arbor, MI 48103.  
will@journeys-intl.com. Tel: 734-665-4407.

**Organizational background at: [www.hmana.org](http://www.hmana.org)**

Keith L. Bildstein, Hawk Mountain Sanctuary Association,  
1700 Hawk Mountain Road, Kempton, PA 19529.  
bildstein@hawkmtn.org. Tel: 570-943-3411, ext. 108.  
**Organizational background at: [www.hawkmountain.org](http://www.hawkmountain.org)**

Jeff Smith, HawkWatch International,  
1800 S. West Temple, Suite 226, Salt Lake City, UT 84115.  
jsmith@hawkwatch.org. Tel: 801-484-6808, ext. 109.  
**Organizational background at: [www.hawkwatch.org](http://www.hawkwatch.org)**



Sharp-shinned Hawk