



Raptor Research Foundation

50th Anniversary

2016 ANNUAL CONFERENCE
OCT 16-20 | CAPE MAY, NJ



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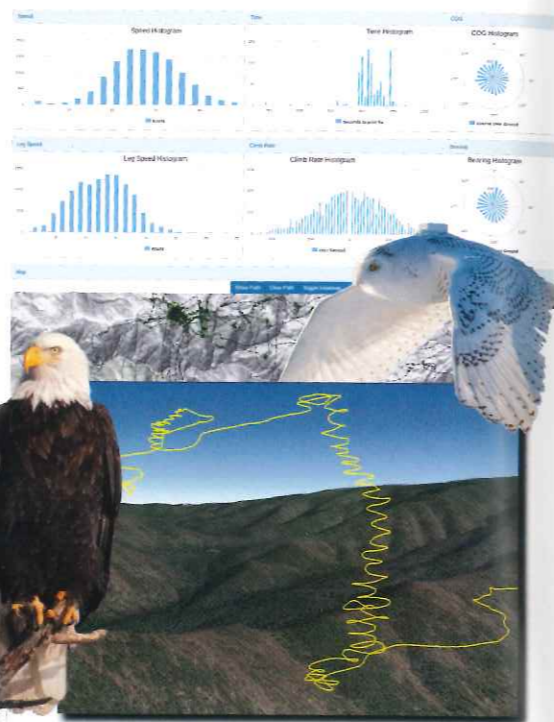
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Conference Quick Schedule

Sunday, October 16

8 AM - 5 PM	Avian Power Line Interaction Committee Workshop (APLIC)	see page 18 for details
8:30 AM - 5 PM	Analysis: A Professional Development Course in Telemetry	see page 18 for details
8 AM - 12 PM	ECRR Workshop - Raptor Trapping at Cape May	see page 18 for details
10 AM - 12 PM	ECRR Workshop - Raptor Trapping and Handling Techniques	see page 18 for details
8 AM - 12 PM, 1-5 PM	ECRR Workshop - Harnessing Raptors with Transmitters	see page 18 for details
8:30 AM - 12 PM, 1-4:30 PM	ECRR Workshop - Techniques for Handling, Auxiliary, Measuring, and Blood Sampling Raptors	see page 18 for details
8 AM - 12 PM	ECRR Workshop - Raptor Necropsy	see page 18 for details
8 AM - 4 PM	ECRR Workshop - Raptor Field and In-hand ID, Ageing and Sexing, Recent Taxonomic Changes in Raptors, and Molt and Its Use in Ageing	see page 18 for details
6-8 PM	Ice Breaker/Welcome Reception (sponsored by ECRR) with lite fare and cash bar	5th Floor Penthouse Ballroom

Monday, October 17

8-9 AM	Announcements and Plenary Speaker by Dr. Ian Newton	5th Floor Penthouse Ballroom
9-9:40 AM	Understanding, Appreciation, and Conservation of Birds of Prey for Over 50 Years	5th Floor Penthouse Ballroom
10-11:40 AM	Population Monitoring	1st Floor Ballroom A
10 AM - 4:40 PM	Urban Raptors Symposium	1st Floor Ballroom B
10 AM - 4:40 PM	50 Year Anniversary Symposium	1st Floor Ballroom C
12:15-1 PM	Scientists and Public Policy: Yes, You Can! Yes, You Should! (by Ellen Paul)	Crystal Room on Ground Floor
1:20-4:40 PM	Migration and Movement	1st Floor Ballroom A
5-6 PM	Poster Session	5th Floor Penthouse Ballroom
6-8 PM	Poster Reception with lite fare and cash bar	5th Floor Penthouse Ballroom

Tuesday, October 18

8-9 AM	Announcements and Plenary Talk by Dr. Carol McIntyre	5th Floor Penthouse Ballroom
9-9:40 AM	Second Plenary Panel: Women in Raptor Research	5th Floor Penthouse Ballroom
10-11:40 AM	Conservation	1st Floor Ballroom A
10 AM - 4:40 PM	Snowy Owl and Short-eared Owl Symposium	1st Floor Ballroom B
10-11:40 AM	Speed Talks	1st Floor Ballroom C
1:20-4:40 PM	Methods and Techniques	1st Floor Ballroom A
1:20-4:40 PM	Lead and Raptors Symposium	1st Floor Ballroom C
10 AM - 2 PM	Shuttles to Cape May Hawkwatch	front of Grand Hotel
5:30-7:30 PM	Dinner Cruise on Cape May	see page 16 for details

Wednesday, October 19

8-9 AM	Announcements and Plenary Talk by Dr. Yossi Lesham	5th Floor Penthouse Ballroom
9:20-10:40 AM	Northern Saw-whet Owl Symposium	1st Floor Ballroom A
9:20-10:40 AM	Anderson Award	1st Floor Ballroom B
9:20-10:40 AM	Raptor Health	1st Floor Ballroom C
11:20 AM - 2:40 PM	Behavior	1st Floor Ballroom A
11:20-11:40 AM	Breeding and Behavior of Owls	1st Floor Ballroom B
11:20 AM - 2:40 PM	Habitat Use	1st Floor Ballroom C
1:20-3:40 PM	Energy Infrastructure	1st Floor Ballroom B
6-8:30 PM	50th Anniversary Banquet and Dance Party	5th Floor Penthouse Ballroom

Thursday, October 20

8 AM - 2:30 PM	Cumberland County Hotspots field trip	see page 17 for details
8:30 AM - 4 PM	A Day of Hawkwatching with Frank Nicoletti field trip	see page 17 for details
7 AM - 2:30 PM	Cap May Migration Grand Slam with Tom Reed field trip	see page 17 for details
7-9 AM, 10 AM - 12 PM, 1-3 PM, 4-6	An Exclusive Cape May Raptor Banding Experience field trip	see page 17 for details

areas between years. Vegetation within core wintering areas and at many stopovers was associated with evergreen forest/woodland, suggesting conifer forests are important habitats throughout the owl's annual cycle.

Home Range, Territorial Behavior and Individual Interactions of Breeding Bonelli's Eagles (*Aquila fasciata*) Tracked by High-resolution GSM/GPS Telemetry in Spain

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We are living in a technology-driven era of biological discovery. In the field of ornithology, tracking technologies have facilitated dramatic advances in the understanding of ecology and animal behavior. In this presentation we will show the preliminary results of an on-going remote tracking project of breeding Bonelli's Eagles in Eastern Spain. The Bonelli's Eagle is a long-lived endangered species in Europe which main threats include high mortality due to electrocution, collision with power lines, and direct persecution (i.e., mainly poisoning and shooting). Thanks to high-resolution GSM/GPS telemetry we have obtained more than 1.5 million GPS locations of six neighboring breeding pairs (including 13 different individuals). Home range areas reported here were larger than those previously reported using conventional radio-tracking. Home range size was smaller during the breeding season (January – June) than during the non-breeding season (July – December). Eagles are resident throughout the year, showing strong territorial behavior and site fidelity. Nonetheless, short-time sporadic interactions were recorded between neighboring pairs during the annual cycle. Males and females spent most of their time together, which is due to cooperative hunting behavior. Interestingly, eagles made long-distance (> 40 km) occasional movements (which we called "excursions") both during the breeding and non-breeding season. During these excursions, usually taking less than 1-2 hrs, birds flew over other neighboring territories probably to explore new potential mates. Space use varied considerably within the home range and remarkably, places located far from nesting sites were used more frequently than some areas located closer. Therefore, traditional conservation measures based on establishing restrictive rules within a fixed radius around nesting sites could be biologically meaningless if other areas within the home range are not protected too. High-resolution telemetry is facilitating improved insight into raptors' spatial ecology and behavior, which is key for the conservation of endangered species.

Pre- and Post-Construction Power Line Collision Risk Assessment for Raptors at Kittatinny Ridge

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The Susquehanna-Roseland (S-R) project is a 500-kilovolt (kV) 55-60m tall transmission line which included the rebuilding of a 230kV, 20-25m tall single-circuit in 2013. The S-R line follows an existing transmission right-of-way spanning Kittatinny Ridge, part of the Appalachian Raptor Migration Flyway in Pennsylvania and New Jersey. The 500 kV transmission line was constructed with bundled conductors with spacers that helped increase line visibility. The overhead static wires were marked with bird/swan flight diverters at the Kittatinny Ridge crossing. Prior to construction in 2013, fall migration data were collected on Kittatinny Ridge establishing baseline raptor movements to assess potential collision risks with the taller S-R line. The survey protocol adhered to Hawk Migration Association of North America's (HMANA) standard data collection protocol for raptor migration monitoring. Additionally, each observer used laser range finders to record distance and angle of each crossing raptor. Two years of post-construction data were collected using the same techniques. All observations were merged with engineering's PLS-CADD line design model, depicting the transmission structures and wires in three dimensions. This novel approach allowed three-dimensional raptor locations and the line to be viewed together at any angle, and for efficient comparisons of pre and post-construction raptor crossings. Pre-construction, 3,698 raptors were detected, with 71.6% of crossings above the proposed height of the S-R line, while 24.0% passed through the theoretical wire zone. In contrast, post-construction, a total of 7,875 raptors crossed the S-R line during 2014 and 2015 with 89.6% (n=70,565) crossing above the new wires. This resulted in significantly fewer raptors passing through the wire zone (6%). Birds passing through the wire zone (n=322, 66%) were comprised mostly of vultures. Additionally, the observers had a clear view of the new S-R transmission wires for 1,780 hours, and no avian wire collisions were noted.

Landscape Composition and Year Effects on Northern Saw-whet Owl (*Aegolius acadicus*) Nest-box Occupation Over one Decade in Northwestern Quebec

* Presenting Author

** William C. Andersen Memorial Award Candidate

that hatched in incubators chose elevated nest boxes, whereas those hatched in natural nests preferred ground nests. Examples of possible nest-site imprinting in raptors include Peregrine Falcons (*Falco peregrinus*) selecting nest sites on buildings and bridges in North America after the release of captive-bred juveniles from artificial structures rather than cliff nest sites. Our objective was to investigate potential nest-site imprinting in Burrowing Owls (*Athene cunicularia*). We used long-term data collected between 1997-2016 for Burrowing Owls nesting in artificial burrows in the Morley Nelson Snake River Birds of Prey National Conservation Area in Idaho. These owls nested in artificial burrows that differed in chamber size and tunnel dimensions. Using observations of >250 individuals who were raised in artificial burrows and subsequently nested in them, we tested whether young raised in a particular burrow/tunnel configuration exhibited preference for that configuration throughout their nesting life, which would imply imprinting. Our results contribute to understanding of the ontogeny of behavior in raptors and the breeding ecology of Burrowing Owls.

associated with currently used, previously used, and unused Northern Goshawk territories within our study area to better inform local forest management practices, and to provide additional clarity to the established literature on Goshawk sensitivity to forest structural changes.

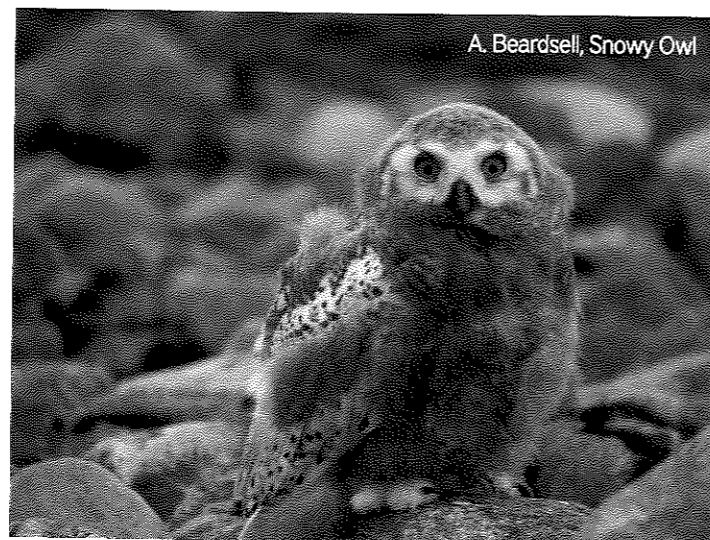


Jeff Zirpoli, Burrowing Owl

Microhabitat Characteristics of Northern Goshawk (*Accipiter gentilis*) Nest Sites in the Naturally Fragmented Forests of the Northern Great Basin, U.S.A.

**LAUREN E. WHITENACK (lalauren@live.unc.edu), GREGORY S. KALTENECKER, JAY D. CARLISLE, and ROBERT A. MILLER, Intermountain Bird Observatory and Raptor Research Center, Department of Biological Sciences, Boise State University, Boise, ID, U.S.A.

The Northern Goshawk occupies a variety of habitats across its Holarctic range. The Goshawk has generally shown great flexibility in its use of habitat structure, but at the local level, a population may thrive under more specific conditions, rendering habitat models developed elsewhere less useful. We set forth to identify and quantify important characteristics of the habitat used by Goshawks within the high-elevation mixed forest and shrub-steppe landscape of the northern Great Basin in south-central Idaho. Our study area has a robust Northern Goshawk population, yet is structurally distinct from many areas where Goshawks have been thoroughly studied. Anecdotal evidence from the area suggests that Goshawks respond favorably to forest thinning, particularly within Lodgepole Pine stands; however, over-thinning may have resulted in territorial abandonment on more than one occasion. The available literature provides contradictory evidence with regards to the sensitivity of Goshawks to forest management practices, justifying increased analysis of the effects, particularly in areas with forest structure that deviates from previous study areas. We quantified micro- and macro-habitat characteristics



A. Beardsell, Snowy Owl

* Presenting Author
** William C. Andersen Memorial Award Candidate

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