

**DEDICATED TO PERPETUATING AN  
ECONOMICAL AND EFFICIENT  
PROGRAM IN RESOURCE  
MANAGEMENT AVIATION**

ASSOCIATION OBJECTIVES:

- A. To promote the recognition of the importance of sound aviation practices in resource management, with safety as the paramount factor.
- B. To encourage and develop the educational, social, and economic interests of aviation in resource management.
- C. To exchange information on operational techniques and procedures.
- D. To utilize member experiences to develop and distribute reference materials of aviation interest to the Association.
- E. To coordinate, research, and promote new techniques and equipment.
- F. To take all action necessary to further the use of aircraft in natural resource management.

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**OSPREY NEST CONSTRUCTION  
A Tale of Two Timbers...**

Joe Barber, Ohio DOW

**Osprey Reintroduction to Ohio**

Ospreys were once common in the state of Ohio until populations declined in the late 1800's and the early 1900's. Specific causes of this decline were associated with shooting, decreased water quality, nest-site disturbance, and habitat loss. The last known osprey nest was observed at Buckeye Lake in central Ohio in 1941.

The osprey reintroduction program started in 1996 as a wildlife diversity project to establish twenty breeding pairs in the state by the year 2010. Ospreys are being hacked at five locations throughout the state. The young birds are picked up in New York, Virginia, and Maryland by the Division's Partenavia airplane, and flown to Ohio to one of the five hacking sites. The birds are typically collected at five to seven weeks of age by taking no more than one chick from nests having at least three young. The young birds are transported in cardboard pet carriers, and typically we carry fifteen birds per trip. Close contact with providers has been critical for arranging flight schedules and pick-up dates using our own aircraft. This allows for quick turn-around times to each of the various hack sites. Upon arrival the birds are hydrated, checked over for condition, color marked, and banded.

At the beginning of the 1999 breeding season, a total of six osprey nesting pairs are known to occur in Ohio. Nesting pairs are expected to increase within the next few years as birds return to Ohio after reaching a breeding age of 3-4 years.

In preparation for the return of adult breeding birds back to the Ohio

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*Pandion haliaetus*

**SAFETY CORNER  
Bird Dogging It...**

Dennis Dura, D.P.E.

Aircraft stability is something we don't normally think about on operational missions. In many cases, as long as we are experiencing powered flight in calm air, aircraft stability is the furthest from our mind. But if the engine quits or the air turns turbulent, we could be in for a big surprise. There are two basic types of stability: static and dynamic. Static stability is the tendency of an aircraft to return to equilibrium flight conditions after a disturbance has deflected it from equilibrium. Dynamic stability considers the motion of the aircraft with respect to time returning to equilibrium after a disturbance. However, strong stability will make the aircraft more difficult to control. A proper balance between stability and controllability is important for a "good feel" of the aircraft. If an aircraft is not stable, unusual control forces are necessary to fly the aircraft, and trimming is difficult. In an airplane the pilot trims out the control forces, creating zero moments in pitch, roll, and yaw. A helicopter is dynamically stable as long as the pilot adjusts to angle-of-attack changes in the main rotor. For a helicopter the horizontal stabilizer aids in pitch stability, and the pilot's cyclic realignment of the thrust vector with the center of mass reestablishes stability for changes in airspeed or attitude.



*O-1 Bird Dog*

So, what does this mean to the pilot in the field? Anytime a pilot operates near the design limits of an airplane, more power and control inputs may be necessary for controllability. If a pilot is operating on the "edge" and there is a loss of power or turbulence is encountered, the aircraft may experience instability and loss of control. This is why it is important to stay within weight and balance limits, trim to the aircraft's configuration, and be aware of the feel of the aircraft. Mechanically flying an aircraft not only invites disaster, but takes away from the artistry of flying. As Natural Resource Pilots we have missions to fly low and slow. It would behoove us to become one with the aircraft and continually sense the response of the aircraft.

During a mission in Vietnam, while I was flying a Birdog (O1D) with 60 degrees of flaps, low and slow, looking for the bad guys, and adjusting artillery, I tried to maneuver away from some enemy fire that I was receiving. The airplane stalled and started to enter a spin. Almost at the same time I started to reduce the flaps, applied opposite rudder, and initiated a recovery just above the trees. I survived to tell you this war story because, even though in the excitement I stalled the

*(Continued on page 3)*

A DEBT OF GRATITUDE

Curly's Gold!

From the IANRP



Curly posing with his award!

A long overdue award was presented recently to one of the IANRP's most faithful and supportive members, Curly Satterlee. Curly is currently serving as the organization's Public Affairs Officer, but most members know that his involvement in the IANRP runs much deeper than that. He was one of the charter members present at the founding of the organization in 1972. He served as president in 1977, and for many more years as editor for the ConAero Newsletter.

His aviation background is extensive. He cut his flying teeth over the infamous "hump" in the Burma theater during WWII, and served a full career with Air Force, before going to work as a pilot /information officer for the Virginia Commission of Game & Inland Fisheries. He has remained actively involved in IANRP affairs since his retirement. The framed illustration highlights these events. Congratulations Curly!

RESOURCE PILOT SURVEY

The Buck Starts Here...

Cyril Griesbach, WDNR

BASIC ORGANIZATIONAL DATA

AGENCY	# Pilots	# Acft	# Pay Grades	Centrally Based	Satellite Based
Alaska	50	43	2		X
Arizona	5	5	2	X	
BLM	12	7	1		X
California	8	7	2		X
Colorado	4	4	1		X
Georgia	5	4		X	
Maryland	2	3	1	X	
Michigan	5	7	2		X
Minnesota	4	9	8		X
Missouri	3	4	2	X	
New York	34	14	4	X	
Ohio	1	3	3	X	
Tennessee	7	6	3	X	
USFS Milwaukee		4	2		X
USFWS	60	52	6		X
Utah	2	3	8	X	
Virginia	1	2	2	X	
Wisconsin	11	16	2		X

In the second half of 1998 the pilots of the Wisconsin Department of Natural Resources made an effort to survey the work performed and salaries of their counterparts. The intention was to have an "apples to apples" comparison of the work duties, work environment and salaries of Wisconsin DNR pilots to the pilots of similar agencies.

A survey form was developed that included a comprehensive listing of the major work duties expected of Wisconsin DNR pilots, and input from other agencies doing similar work was procured. The design of the effort was to list the work done by Wisconsin DNR pilots and see how other agencies compared. In acquiring the data, the responses came from at least the Aviation Manager or Chief Pilot level of the responding agencies.

The agencies surveyed came primarily from the membership of the International Association of Natural Resource Pilots. A complete list of the data collected, including graphs, can be downloaded from the IANRP Web Page Links & Downloads Chapter. It is a self-extracting ZIP file.

PILOT RATINGS REQUIRED

Certain positions may require one or more of these ratings.

AGENCY	PVT	COMM	INST	MULTI	ATP	SEA	CFI	A&P
Alaska	X							
Arizona	X	X	X	X				
BLM	X	X	X	X	X			
California	X	X	X	X				
Colorado	X	X	X					
Georgia	X	X	X		X			
Maryland	X	X	X	X				
Michigan	X	X	X					
Minnesota	X	X	X					
Missouri	X	X	X					
New York	X	X	X					
Ohio	X	X						
Tennessee	X	X	X	X				
USFS Milwaukee	X	X	X	X				
USFWS	X	X	X					
Utah	X	X	X					
Virginia	X	X	X					
Wisconsin	X	X	X	X		* X	* X	* X

- In Memoriam -

It is with great sadness that we must report another tremendous loss to the wildlife and aviation communities. On Friday, June 11, 1999, Eric Cox, a Ph.D. student at the University of Idaho, and Minnesota State Conservation Officer Grant Coyour were flying moose calf surveys over the Red Lake Wildlife Management Area in Minnesota. Their plane went down, and both Eric and Grant were killed.

The cause of the crash hasn't been determined, but the National Transportation Safety Board and the MN DNR are investigating. The deaths are the first in the 52-year history of the MN DNR Aviation Section.

Services were held for Eric Cox in Harbor Springs, Michigan. Services for Grant Coyour took place in his hometown, Springfield, Minnesota.

We were informed of the tragedy by E. Goldstein via the following E-Mail address:

eliseq@U.WASHINGTON.EDU

**FLIGHT TIME REQUIRED FOR HIRING**

	WI	AK	AZ	BLM	CA	CO	GA	MD	MI	MN	MO	NY	OH	TN	USFS	UWFS	UT	VA
<b>TOTAL</b>		200	2000	1500			2000	1600	2000		3000	1500		1000	1500		1500	
<b>PIC</b>	1200				1500	1000	1500	300	1500		2500		500		1200	500	1500	1200

**TYPE OF FLYING PERFORMED WITHOUT ANY EXCEPTION**

	WI	AK	AZ	BLM	CA	CO	GA	MD	MI	MN	MO	NY	OH	TN	USFS	UWFS	UT	VA
<b>SEL Night</b>	X		X			* X	X	X	X	X				X		X		X
<b>SEL Low Level</b>	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X
<b>Over Water</b>	X	X			X	X	X	X		X		X	X			X	X	X
<b>Extended Over Water</b>	X	X			X		X	X		X		X					X	X
<b>Floats</b>	X	X						X		X					X	X		
<b>Skis</b>	X	X						X		X					X	X		
<b>Passenger</b>	X	X	X	X	* X	* X	X	X	X	X	X	X		X	X	* X		* X
<b>Average</b>	100%	86%	43%	29%	50%	40%	71%	100%	43%	100%	29%	43%	29%	29%	43%	86%	43%	70%

**PILOT 1 SALARIES**

AGENCY	START	5 YEARS	10 YEARS	20 YEARS
ALASKA	40,000	55,000	65,000	75,000
ARIZONA	34,097	37,896	42,645	52,145
BLM	46,254	50,609	53,784	60,135
CALIFORNIA	47,148	55,812	63,846	79,914
COLORADO	36,000	40,000	44,000	52,000
GEORGIA	48,000	58,000	68,000	88,000
MARYLAND	39,959	50,209	51,540	55,679
MICHIGAN	32,760	34,970	37,180	41,600
MINNESOTA	40,997	48,069	53,165	63,357
MISSOURI	34,104	41,085	48,066	62,028
NEW YORK	48,800	58,125	67,450	86,100
OHIO	34,549	43,742	48,513	50,938
TENNESSEE	31,500	34,710	37,920	44,340
USFS	45,000	53,333	56,166	59,000
USFWS	31,897	47,887	51,969	60,135
UTAH	29,120	32,240	35,360	41,600
VIRGINIA	19,600	28,200	36,800	54,000
WISCONSIN	31,487	34,640	36,387	41,912

**PILOT 2 SALARIES**

AGENCY	START	5 YEARS	10 YEARS	20 YEARS
ALASKA	50,000	65,000	71,666	85,000
ARIZONA	37,206	42,089	46,972	56,739
BLM	NA	NA	NA	NA
CALIFORNIA	58,560	71,172	83,784	109,008
COLORADO	NA	NA	NA	NA
GEORGIA	50,400	60,900	71,400	92,400
MARYLAND	41,459	52,105	55,539	58,357
MICHIGAN	34,320	37,752	41,184	48,048
MINNESOTA	46,238	54,142	62,150	71,635
MISSOURI	38,436	46,299	54,162	69,888
NEW YORK	50,216	68,819	87,422	124,629
OHIO	37,877	48,152	51,434	58,000
TENNESSEE	32,964	37,944	42,924	52,884
USFS	54,000	58,000	62,000	70,000
USFWS	64,998	69,872	74,746	84,495
UTAH	NA	NA	NA	NA
VIRGINIA	NA	NA	NA	NA
WISCONSIN	32,749	36,849	39,497	44,784

*(BIRD DOGGING IT Continued from page 1)*  
 aircraft, I never stopped flying it and continued to feel the response of the airplane to my control inputs. Let's make sure that we are all around in the years to come, and can tell war stories and fairy tales to the next generation during hanger talk sessions.

**- Dennis E. Dura, D.P.E. -**

**IANRP WEB PAGE**

The IANRP Web Page is now on line.

The formal address is:

<http://IANRP.org>

Send remarks to:

Newsletter Editor: [MAG10@prodigy.net](mailto:MAG10@prodigy.net)



I herewith petition the Executive Committee of the International Association of Natural Resource Pilots for Membership.

Name \_\_\_\_\_ Title \_\_\_\_\_

Department \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip \_\_\_\_\_

Work Phone ( ) \_\_\_\_\_ Home Phone ( ) \_\_\_\_\_

Fax ( ) \_\_\_\_\_ E-Mail \_\_\_\_\_

Signature \_\_\_\_\_

This is a :  Renewal Full Member  Original Membership (Check One) Associate member (Check One)

MAIL TO: IANRP Treasurer  
 9740 Briarwood Drive  
 Plain City, Ohio 45064

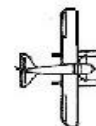
(Please enclose \$20 membership)

# Con Aero Newsletter

IANRP Treasurer  
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## THE INTERNATIONAL ASSOCIATION OF NATURAL RESOURCE PILOTS



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( Osprey Reintroduction to Ohio Continued from page 1)

area our biologist have been developing nesting structures and locating these structures in areas that will attract the birds. The nesting structures consist of a 25 to 30 foot long telephone pole with a 4' x 4' platform mounted on top of the pole. The location of the structures is the critical element of their success. The best locations are always in the hardest areas to gain access. This year, for the first time, we utilized the Division's Bell JetRanger to lift these structures into place.

We utilized a remote hook and steel cable to lift the poles upright and placed them in pre-dug holes. One location was the transition area from shore line of a lake to wetland, and the second location was on a small island with no access other than by small boat. Both structures were floated to the locations (versus flying the poles to the sites) for safety and efficiency reasons. Two 30' guide lines were attached to the bottom of the poles so personnel could guide the poles into the hole. The load was weight tested before the ground crew was allowed to assume their stations. All support personnel had direct communications with the helicopter via hand held radios and headsets. This was done to ensure positive communications between the pilot and ground crew in the event of an emergency. Once in place, the poles needed to be held erect while the ground crew back-filled the base. The entire operation required about 5 minutes per pole with personnel working underneath the helicopter.

As with many aviation projects the execution is not always the most difficult part. The preparations and planning can often be the most difficult. We put the plan together, we conferred with the local FAA representatives regarding the plan, we practiced, and then we executed the plan.

The only unanticipated variable was the weight of the poles. We contacted a local utility for estimates, but in the field we found a dramatic weight difference in poles of similar dimensions depending upon the amount of creosote absorption present. It was necessary to operate with minimal fuel in order to accommodate the loads.

Everything went without a hitch, now we just need the ospreys to like what we've done.

- Joe Barber, Ohio Division of Wildlife -

### - Miscellaneous Products -

Each year preventable accidents result from pilots miscalculating the amount of fuel they have on board. You can't trust light plane fuel gauges, but you can completely trust a new clear plastic fuel dipstick. The "Fuel Hawk" works like a drinking straw: just touch the gauge to the fuel tank bottom, put your thumb over the end, and read from the calibrated graduation markings on the side. For more information see:

<http://www.avshop.net/avshop/pilot-supplies.html>

### Calendar of Events

- 07/23/99 Society for Conservation GIS (SCGIS) Idyllwild, California.
- 07/26/99 ESRI User's Conference San Diego, California.
- 07/26/99 NAWEOA Conference '99 St. Louis, Missouri
- 08/14/99 Aviation Expo '99 Kansas City, Missouri.
- 08/28/99 Rochester Int'l Air Show Rochester, New York.
- 09/28/99 FAA International Aviation Training Symposium Oklahoma City, Oklahoma.
- 10/24/99 Microcomputer Applications in Fish & Wildlife Stateline, Nevada.
- 11/02/99 FWS GIS National Workshop Phoenix, Arizona.

See Details on the IANRP Web Page

### CLASSIFIED ADVERTISEMENTS

**CLASSIFIED RATES:** \$25 per 100 words, or portion thereof; per issue. No charge to IANRP members for job postings. Payments due in advance of issue date without prior arrangement. Contact editor.

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