

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

**PRESIDENTS MESSAGE**

**BY  
Paul Anderson**

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.



**K**nots. One of those obscure terms which all of us in aviation use, but many of us do not know the derivation. To our members who are reading this and may have more nautical experience than I, it probably seems silly that this is a big deal, but since I started flying planes that indicate speed in knots, I have wondered where the term originated. My first charter trip was in a

Comanche in 1986. I was flying passengers from Pierre, South Dakota to Sioux Falls, South Dakota, when my front seat passenger asked "how fast are we going?", and since I had a state of the art DME I answered "150 knots". The next question from my passenger was, "How many miles per hour is that?". Being a professional pilot on my first charter, I of course knew the answer was 170 miles per hour (or somewhere around there.) The discussion led to where the word 'knots' came from, what it represents, and so on. I had to admit I didn't know. Not wanting to be embarrassed in the future by not knowing all there is to know about aviation, I checked with my fellow charter pilots. They didn't

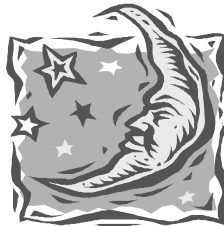
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**SAFETY CORNER  
NIGHT FLIGHT**

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

Night time can legally be logged when a flight occurs between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac in accordance with FAR 1. In accordance with FAR 61.57b, no person may act as pilot in command of an aircraft carrying passengers during the period beginning 1 hour after sunset and ending 1 hour before sunrise, unless within the preceding 90 days that person has made at least three takeoffs and three landings to a full stop during the period beginning 1 hour after sunset and ending 1 hour before sunrise. That person must be the sole manipulator of the controls and the landings and takeoffs performed in an aircraft of the same category, class



and type. Even though the aircraft does not know whether it is day or night, pilots usually experience an increased level of anxiety during night flying than day flying. One major reason for this is the fact that we are diurnal animals, not nocturnal animals. We normally sleep at night and our eye sight is best during the day. We lose our cone vision (center vision) at night which is our night blind spot. We have to rely on our rod vision (peripheral vision) using scanning techniques and off-center viewing. Using our peripheral vision degrades our visual acuity (something less than 20/20) and depth perception. If a VASI is not available for a night approach, the

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## PILOT MAINTENANCE

Val Judkins

**I**t was March 1st, 1999, and I was excited to be packing for a weeks work in British Columbia for the purpose of Sea Lion surveys. The Amphib Beaver has been readied for the flight on the previous Friday, and was ready for an early start.

I had experienced a few stomach pains, and had visited the doctor three or four times, and taken several tests during the past few months. The tests failed to indicate any problems and the Doctor suggested taking some anti-acid medicine, as heartburn was the only symptom that he felt I had. I was feeling well now, and enjoyed a nice Sunday dinner with the family.

I retired to bed early, so I could get up early. About midnight, I awoke with severe stomach pains, much worse than any previous pain. I called the night Doctor at the hospital and he suggested ant-acid and said to call if the pains got worse. About two AM the pains got worse. I was experiencing hot and cold flashes and sweating profusely. The pain was so great that I could not stand up. My wife called the Hospital and told them that she was bringing me in. Demerol provided no relief, so they gave me Morphine. It took the edge off the pain, but I really got no rest till they put a "block" in my back. After many hours and many tests and X-rays, my Doctor suggested exploratory surgery, with appendicitis being the most likely prognosis.

After five hours in surgery, I awoke to the announcement that the surgeons had removed ten inches of my intestines and a large tumor that appeared cancerous. It is absolutely amazing how fast ones world can come tum-

### *(SAFETY CORNER Continued from page 1)*

approach is usually executed on the steep side to avoid obstacles. Whether you are flying an airplane or helicopter, a shallow to normal approach into a black hole has resulted in landing short, causing a number of accidents. Keep in mind that a steep approach in an airplane may result in a greater landing distance because of landing further down the runway and/or landing with a little more speed than normal. In a helicopter, be careful of settling with power and /or requiring more power to terminate the approach than normal. Landing lights burn out at times and it would be wise to practice a few no landing light approaches under controlled conditions. This would give you some experience in what to expect from a no landing light approach and landing from your aircraft. Cockpit lighting should be at a level that does not require you to strain to see the instruments, but dim enough to help you retain your night vision. Be familiar enough with the cockpit switchology that you do not need to search around for a switch under reduced light conditions. Beside having a flashlight with extra batteries, it is always good insurance to invest in a couple of chemical light sticks as back up. You are more susceptible to visual illusions at night and a good instrument scan with proper outside scanning will reduce the possibility of illusions or vertigo. Keep up your instrument proficiency. At night, it is easy to inadvertently go IMC or lose the horizon. Night flight does not have to become night fright.

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

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know either.

One Tuesday night in March, I was watching NOVA on PBS. A researcher was explaining where the term 'knots' was derived. It was used by early sailors. A line was attached to a triangle of wood called the log. The line had knots tied at intervals of 48 feet, 3 inches. The navigator would shout "turn" and the sailor would count the number of knots flowing through his fingers in the time it took a 28 second sand glass to empty. This would give the speed of the ship in knots. So simple, but the answer eluded me for a long time.

We, as members of the International Association of Natural Resource Pilots, have many questions where the answer eludes us. The information is often there, but we have such unique hobs that we have to find the right person to ask. In the field of natural resource flying the exchange of this information is invaluable to getting the job done and getting the job done safely. The organization has three food forums for the exchange of this information, One is the newsletter you are reading. Another is Con-aero which is available to all members that subscribe via e-mail. Third is our annual meeting, where we exchange information and meet members who provide great contacts for information on these kinds of questions. I want to encourage all of you to use any of these resources when you have information or Questions. I feel this is our organizations purpose. As a group we do a unique type of flying and there are relatively few of us. I am glad that this organization, its members, and its resources are available.

Paul Anderson  
Pilot/Biologist  
North Dakota Game and Fish

**DEPARTMENT OF THE MONTH**  
 California Fish and Game  
 Air Services Unit



By Bob Cole and Carrol Faist

With 158,000 square miles of terrain, 1,000 miles of coastline, and adjacent ocean waters under its stewardship, the Department of Fish and game relies heavily on it's "air wing" for proper management and protection of the state's wildlife and fisheries resources. Coverage of such a vast area demands a mobility which only aircraft can provide.

While other states use planes in conservation and patrol work, California was the first in the nation to utilize full-time pilots and aircraft.

Eight pilots and seven airplanes operate out of Department hangars located at Sacramento, Hemet, Redding and Fresno.

The planes - one twin engine Beechcraft King Air 200, one twin engine four place Cessna 337, four single engine Cessna 185's and a twin engine Partenavia Observer are operated under the jurisdiction

of the Department's Administrative branch. The varied work assignments are made at both the staff and regional levels, with operations concentrated in the areas of wildlife management, inland and marine fisheries management and in law enforcement.

The overall use program, supervision of warden-pilots, and responsibility of acquisition and maintenance rests with the Senior Warden Pilot, Bob Cole. He along with his pilot staff, consisting of Loren Goehring, Larry Heitz, Rich Anthes, Ron VanBenthuisen, Bob Morgan, Jeff Veal and Tom Evans, have a combined time, in the air, of more than 60,000 hours.

Each of the Warden Pilots is also a licensed airframe and powerplant mechanic. All maintenance of the aircraft and support equipment is performed by them.

Each airplane has it's place in the air activities of the Department. On a year-round basis, the planes each average 500 hours of flight time annually.

Four Cessna 185s are the Awork-horse@ of the Department. They have multiple duties--making surveys of bird and animal populations, herding waterfowl from polluted or disease-infested habitat, assisting in herding Canadian honkers during banding operations, tracking birds and animals through use of radio telemetry, surveying salmon spawning, conducting hunting and angler pressure surveys, familiarizing field personnel with their areas, assisting ground wardens with their law enforcement duties, and performing innumerable other aerial operations.

The very first use, and still one of the most important uses of the light planes is law enforcement work. All eight of the pilots are game wardens, and much of their time in the air is spent in the pursuit of game law violators or in the prevention of law violations. All seven planes are radio equipped and operate within the Department's radio network along with the patrol vehicles and boats. Many a violator who would otherwise have escaped has been rounded up by the airplane, and many times the violator finds out how he or she was caught while trying to explain their acts to the judge.

The planes, while simply flying a routine salmon redd survey or a boundary line patrol during deer season, will often create an apprehensive fear within the person below who is violating, or who is about to wilfully violate game laws. In just being there, the DFG planes become an effective deterrent to law violations.

In recent years, the planes have been heavily involved in studies relating to rare and endangered species of fish and wildlife. They assist in locating nests, dens and breeding grounds, aid in studies of man's encroachment on critical migratory routes and wintering grounds, and to assist in surveys of loss of habitat to land and water development.

While it will never replace the horse or the automobile, the airplane has indeed proven it's worth. It is a modern day supplement to other tools in research, management and protection of the state's wildlife and other natural resources.

Bob and Carol are now both retired Senior Wardens.

Note from the editor – I would like to expand on the theme of “Who We Are” with “What We Fly” and “What We Do”. Please send me your pictures of yourself and your aircraft with details of each. Also, we all are involved with some interesting kinds of flying, and I would like stories of your unusual (or usual) flight operations. This should be a fun and informative way to get to know each other better. Thanking all of you for your support to help keep this newsletter going.

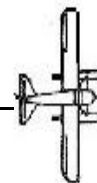
# Con Aero Newsletter

IANRP  
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## THE INTERNATIONAL ASSOCIATION OF

## NATURAL RESOURCE PILOTS



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### IANRP WEB PAGE

The IANRP Web Page is now on line.  
The formal address is:  
<http://IANRP.org>



### Calendar of Events

05/17/01 IANRP Convention  
Mystic, Conn

*See Details on the IANRP Web Page*

*"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."*  
—Margaret Mead—

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

Name \_\_\_\_\_

Department \_\_\_\_\_ Title \_\_\_\_\_

Address \_\_\_\_\_

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

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

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

Signature \_\_\_\_\_

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

MAIL TO: Joe Barber, IANRP Treasurer  
4121 North River Road, Springfield, OH 45502

MARK YOUR CALENDARS! THE IANRP WORKSHOP 2001 WILL BE HELD AT THE HILTON MYSTIC HOTEL, MYSTIC, CONNECTICUT ON MAY 17th TO THE 19th, 2001.



Arrivals will be on the 16th of May with a briefing that evening in the hospitality room. All pilots and spouses are invited to the hospitality room to meet each other and make plans for the next three days. Departures will be on Sunday, May 20th.

Plans for the Workshop in 2001 are well under way. The workshop will be held at the Hilton Mystic Hotel. This is a **GREAT** location! The famous Mystic Seaport Museum is less than three miles away. The Mystic Aquarium and Whale Research Center are across the street along with the Mystic Village shopping area and lots of places to eat. There will also be free bus service from the hotel to the Foxwoods Casino and Indian/Natural Resource Museum.. The hotel will extend the government rate to us. The room rate will be about \$96 per night for wed., Thurs., and Fri., and about \$125 for Sat. night. The rate is for a single or double . Arrangements at the hotel are being finished this week.

The best airport to fly into is Groton-New London airport (GON) via US Air's regional carrier. If you fly into the Groton-New London airport, you will not need a rental car to get to and from the airport or to local attractions. The hotel will pay for your taxi fare from this airport or from the Amtrak station in New London or Mystic. The Providence, RI (PVD) airport is the closest major airport served by most of the airlines. The next closest major airport is Hartford-Springfield (BDL). A rental car will be needed to travel the 0:45 trip from Providence or the 1:20 trip from Hartford to the hotel.

Initial plans are to have workshop presentations and the annual meeting at the hotel the first two days. On Saturday (third day), plans are being made to go on an all day field trip for pilots and spouses! In the morning we will be going to Chester Airport (3B9) for aircraft static display or demo's! (PLEASE CONSIDER FLYING YOUR AIRPLANE INTO Chester for the static display or demo's!) We will provide transportation for those pilots who fly their department aircraft into Chester.) Then onto Whelen Engineering for a tour of the factory where they make anti-collision lighting systems. Lunch will be provided by the boy scout Aviation Explorer Troop at Chester Airport. From there, it is onto Pratt and Whitney's plant for a tour and presentation. At the end of the day we will all have dinner together at Camp Hazen on Cedar Lake in Chester before returning to the hotel.

I welcome anyone who would like to make a presentation at the workshop. Please contact me to make arrangements for the time and the day. I also would like to hear from the members on what topics they would like presentations on. This is your workshop!

Fly Safe!

Tom Brelsford  
Connecticut  
T-B@snet.net



“ At 61 I am feeling like an old –timer but am still healthy, poor and having

a good time flying and maintaining airplanes.

My first solo was in 1958 while attending South Dakota State at Brooking, (degree in economics). I eventually graduated from Northrup Institute of Technology in California with the A&P rating. I picked up the Inspection Authorization in ‘67, plus a number of flight rating along the way. I worked as a pilot/mechanic, service manager, and A&P program director for Rangely Jr. College until joining the National Park Service as a pilot in 1973.

My ratings include: instrument, commercial, ASMEL &S, helicopters, CFI-airplanes S&ME, helicopters, and CFII, AGI&IGI, A&P with AI. I have 23,000 plus hours of flight time and have flown and maintained most light single and multi engine GA aircraft through the Turbo Commanders, Grumman Goose, and etc. Still hoping that some day I’ll get the hang of it!

Most of out flying (700-800 hrs per year) here at Glen Canyon NRA is done in our Cessna U206G. It has the heavy duty gear, Robertson STOL, PA/siren, Govn’t radios, etc.,etc. We do everything one would expect a Natural Resource Agency to do-lots of S&R, hauling of people and cargo, law enforcement, surveys, tracking, photo work (sometimes if business is slow, it appears we just set our own, eh?), and whatever else comes up that we can handle.

We have our own maintenance shop at the Page, AZ municipal airport where we maintain the 206 plus several aircraft from other Parks and law enforcement agencies. We also run a program where NPS pilots can bring their A/C in for an annual inspection and receive training in preventative maintenance for that aircraft.

We are a small but efficient operation and if any of our members are in the area we invite them to look us over and introduce themselves.”

Tug and his lovely wife, JoAnn, have been married for 40 years and have a grown son and daughter. – Editor

**W. B. “TUG” KANGUS**  
PILOT/MECHANIC  
U.S. DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
GLEN CANYON NRA  
PAGE, ARIZONA



(Continued from page 2)

bling down. The aftershock came when the lab results confirmed colon cancer. No one in my family on either side has ever had cancer. To say that I was devastated is an understatement. After twelve days in the hospital, I went home to recover from surgery. In April I started a 22 week chemotherapy protocol. To put it bluntly, it was hell. I was so sick, that I barely remember last summer. I finished that in August, and in October I applied for my flight physical. My AME established my eligibility with an inch thick document of medical reports and sent it to Oklahoma City, to receive FAA approval. This , in itself is another story that I will not detail here, but suffice it to say that all the stories that you have ever heard about FAA bureaucratic SNAFUS are true. Finally, and with the help of AOPA, I received my approval in January. It was surely a great feeling to be able to aviate again! I once again felt whole.

Why am I boring you with this personal experience? Because since my ordeal, four more persons from my agency have been diagnosed with colorectal cancer. I don't know if it is the water here in Washington or what, and frequently, I am asked “what were your symptoms?”, so I know others are worried. I firmly believe that a colonoscopy, a couple of years previously, would have detected the tumor before it turned to cancer. A close friend and fellow pilot was inspired from my experience, to have a colonoscopy, and two polyps were detected and removed, well before the tumor stage. I did not know that colorectal screening should be part of turning fifty. I think that there are many out there who also do not know.

This then, is my purpose: to beat the drum loudly. Get Screened! If anyone would like to talk about it to me personally, please get in touch. I have acquired much information. Listed below are some web sites that are very informative. Stay healthy.

- National Cancer Institute [www.nci.nih.gov](http://www.nci.nih.gov)
- Harvard Center for Cancer Prevention [www.hsph.harvard.edu/colonrisk](http://www.hsph.harvard.edu/colonrisk)
- American Cancer Society [www.cancer.org](http://www.cancer.org)