

VOLUME 17 NUMBER 1 2021



HUNTER & SHOOTING SPORTS EDUCATION

JOURNAL

The Official Publication of the International Hunter Education Association

The Role of Vision in Hunting and Shooting

- **Hunter Orange:
Proving the Obvious**
- **I'm Sorry!! I Didn't Mean To.
I Didn't See You**
- **Solid Hunter Orange
Vs. Camouflage Hunter Orange**



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**International Hunter Education Association
 Mission Statement:**

*To continue the heritage of hunting worldwide
 by developing safe, responsible and
 knowledgeable hunters.*

The International Hunter Education Association (IHEA) is an organization involving 65,000 administrators and volunteer instructors across North America, plus cooperators in the shooting sports industry and conservation organizations in Canada, Mexico and the United States. The IHEA is affiliated with the International Association of Fish and Wildlife Agencies, and its goals are many:

- Increase participation in safe responsible hunting;
 - Further develop the quality and delivery of hunter education;
- Enhance professional skills and standing of administrators and instructors;
- Improve the image of hunters and hunting; and
- Strengthen the leadership role of the IHEA.

The *Hunter & Shooting Sports Education Journal* is the official publication of the International Hunter Education Association. It is published three times annually (June, September, February) and distributed to more than 65,000 administrators and volunteer instructors in Canada, Mexico and the United States, that are responsible for education programs that total more than three-quarters of a million new hunters annually. The purpose of the publication is to increase the skill and effectiveness of hunter education in administrators and instructors so they can improve the enthusiasm, safety, ethics and proficiency of their students as they embark on lifetime enjoyment of hunting and the shooting sports.

The articles and stories contained herein are the opinions of the authors and not necessarily those of the IHEA, its personnel or publishers. Material contained herein cannot be copied or reproduced in any form without the express permission of the IHEA.

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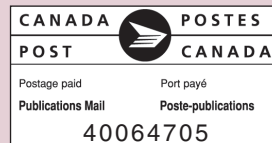
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Cover photo courtesy Wayne Jones, New York State Department of Environmental Conservation Administrator.





President's Remarks

Mac Lang, President IHEA

Change is Constant

In January, Joe Huggins and I flew from Houston to Denver to attend an IHEA Board Meeting. I noticed the *American Way* magazine (12.15.01) had an article with a quote by Scott McNealy, Chairman and CEO of Sun Microsystems. He said, "The opportunity cost of not meeting demand is just too high." It struck me how much this profound statement applied to hunter education.

First, I thought of the need to provide instructor-led courses in every county, parish and island in our states, provinces and territories. In most jurisdictions, over 95 percent of students and instructors prefer traditional courses.

Second, I remembered how much work went into convincing administrators and others to allow alternative delivery courses. I also thought of the funding and developmental issues of workbooks, videos, CD-ROM's, and Internet courses. At least one state made the alternative method the norm. Change is a difficult concept to accept at the onset. However, when you reflect back over time, change is the one constant.

The day before I wrote this article, I had requests to send 30 CD-ROM's to several people and one library. One 62-year-old man called me. He was a retired soldier and needed a card to hunt on military bases. His current job involved swing shifts and two days off. Even with an alternative method for the classroom, he needed a range/field training day on Tuesday or Wednesday. I accommodated his needs, and now he is a cheerleader for hunter education. He is certainly a satisfied customer.

As instructors, let's consider a few questions:

- 1) Does your jurisdiction have special courses for weekend and shift workers?
- 2) Does the course you teach meet the standards established by the IHEA?
- 3) Does your program have a marketing plan?
- 4) Do you offer alternative method courses for the constituents who need them?
- 5) Do you have a standard *Policies & Procedures* manual?
- 6) Do you use several forms of evaluation to check your performance?

When you evaluate the courses given by your teaching team, remember to put yourself in the student's position. One good way to see from this perspective is to take a course in another jurisdiction. This is one of the personal objectives I have for this year.

To the instructors in North America, the IHEA Board, staff and administrators appreciate your dedication and hard work. We hope you have a great hunting season!

International Hunter Education Association

Mission Statement

To continue the heritage of hunting worldwide by developing safe, responsible, and knowledgeable hunters

The International Hunter Education Association is an organization involving some 65,000 volunteer instructors across the country, plus cooperators in the shooting sports industry, and conservation organizations, and the 63 State and Provincial Hunter Education Administrators in Canada, Mexico, and the United States. IHEA is affiliated with the International Association of Fish and Wildlife Agencies, and its goals are many:

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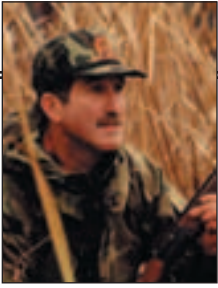
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EVP Comments

Eric C. Nuse, Executive Vice President

Increase Opportunities, Reduce Barriers

Welcome to the fall edition of the *Journal* from sunny Colorado. The theme of this issue is the role of vision in hunting and shooting. I hope you gain some new insights, have some fun, and take some of the information back to your classes.

I would like to send out a big thank you to the contributors to this edition of the *Journal*. Thanks also to Brian Thurston, our tireless publisher and cheerleader. I urge all of you to consider submitting an article, letter to the editor, a teaching tip or constructive criticism so we can make this an even better publication.

I'd like to publicly thank the IHEA staff, Board of Directors and Coordinators for their warm welcome to me as new EVP. It has made all the difference in making this transition successful and enjoyable.

I was also very pleasantly surprised at my very warm reception during an east coast swing to meet some of our conservation partners and supporters. Particular thanks are owed to Bob Byrne with the Wildlife Management Institute (WMI) for hosting me in the Washington D.C. area and for arranging meetings with Jay McAninch, CEO Archery Trade Association (ATA); Josh Winchell, newly hired in the Washington Federal Aid Office; John Baughman, EVP, and Donald MacLauchlan, International Resource Director, International Association of Fish and Wildlife Agencies (IAFWA); and Steve Williams, Director of the US Fish and Wildlife Service. Thanks also to Director of Recruitment and Retention, Jodie Valenta (DiCamillo), for hosting me in Connecticut and arranging for me to meet with Doug Painter, CEO, and Chris Dolnack, Director of Program Development, at the National Shooting Sports Foundation (NSSF).

At the conclusion of this trip several messages came through to me loud and clear:

- These organizations highly value what the IHEA and the State and Provincial hunter education programs have done and are doing.
- They are very concerned about the decline in hunters and what that means for the sustainability of the North American hunting model, wildlife agencies, and the hunting industry.
- They want to help us to maximize our efforts with recruiting and retaining hunters.

- They understand that we have the best and most cost-efficient system in North America to reach new and veteran hunters.

Conversely, I tried to be very clear to them that we also want to maximize our efforts and clearly see ourselves as leaders in recruiting and retaining hunters. We also have no intention of throwing the baby out with the bath water. Safety is still the baseline requirement for the future of hunting, followed closely by high standards of hunter responsibility and ethical behavior. I also emphasized that hunter education is not the only solution to the critical decline in hunter numbers. Directors of our Agencies need to give their programs sufficient resources and staff to do the job and support

“Our job is to ensure our legacy is no less than our heritage.”

– Dr. Charles Johnson

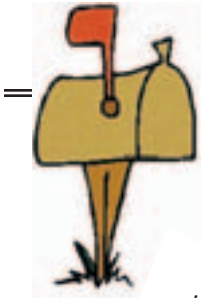
their volunteers. Hunter Education is already the best bang for the buck of any agency program and one of the most successful, but you can only get so much blood from a stone.

I pointed out other areas that all groups who support hunting and shooting and their members should be working hard at, such as expanding youth hunts, assisting with range development, allowing youth and adults to experience hunting in a limited and very controlled manner prior to purchasing a license, and supporting IHEA's and other groups' efforts to increase opportunities for hunting and shooting. They also need to work in the legislative arena, clearing away laws that inhibit recruitment, firearm ownership, and initiate broader based funding.

All of these groups emphasized that anything we can do to increase opportunities and reduce barriers—real or perceived—would be welcome and supported. **Very high on their list is to aggressively implement alternative delivery of hunter education nationwide.** Most notably is increasing usage of the Internet/field day course. NSSF has invested a lot of money in the development of this web-based course, as have many states. The bottom line is none of us want to lose a potential hunter or supporter of hunting simply because they can't get into a class or can't find one that works within their schedule. The days are long gone when we can afford to lose any interested person.

The time for procrastinating, making excuses and ducking the issue is over.

Cont. to next page



Letters to the Editor

A note from our recently retired Hawaii Hunter Education Administrator:

Fellow Professionals,
Just wanted to send my Aloha to you all before I sail off into

the sunset in my canoe.

*"I hunted with passion and determination
because I knew everything.
I taught with the same passion and determination
because everyone should know what I knew.
As a coordinator the passion and determination
still burned but I found out how much I did not know."*

Aloha, Wendell Kam



Attached is an e-mail from a Colorado HE Instructor re: their first class with the Internet course.

Hi Patt (Dorsey, Colorado Hunter Education Administrator):

A quick note to let you know that we completed our first Internet home study course last Saturday, and are generally quite pleased. Good mix of 17 total students, about 70 percent between 9 and 11 years, others from 17 to 47. All passed.

Students' perspective: More interactive, more fun than a workbook. No complaints about burning paper and ink cartridges.

Our perspective: Less time consuming, once we got the curriculum figured out and quit trying to double teach stuff, requirements not withstanding.

We found that class room Q&A went quicker, with students knowing answers instead of waiting for them because they didn't read a chapter assignment. Final exam went quicker, too. Guessing now, I'd say test scores were 5-10 points higher. We found ourselves teaching more survival, etc., and actually had time to do an intensive outdoor classroom deal. Also set up a trap and archery range. And all this in one two-hour evening session and one long Saturday was terrific, two weeks spanned. Of course having a five-person team and Bill M.'s excellent help makes it easier, too.

We are considering teaching classes more often now, like four to five a year instead of two. Allowing for smaller classes, 15-20 seems right, without any more demands on us old guys. We're sold. Still need a few books though.

Rick

Dear Sir: I'm writing to say thank you for the support you have given the IHEA Instructor Rendezvous held on May 16-18 in Lewes, Delaware.

It is quite an important responsibility we as instructors have to educate and send afield knowledgeable, ethical, and above all the safest hunter possible. We, the fraternity of instructors from all the states, take this job very seriously. It is the training we provide that will hopefully make the sport of hunting safer for the hunters and the public alike. It is our goal to see the ranks of licensed hunters increase while the future of sport hunting is preserved for many generations to come.

In closing, let me say that without the support given to us by organizations such as yours, our job would be much more difficult and, in some cases, impossible. I look forward with excitement to many future endeavors with you aiming at our goal of Hunter Education and the future of our beloved sport.

Gary Bennett, Connecticut Master Instructor



The Delaware Rendezvous Gary Bennett refers to was one of two IHEA Rendezvous held in 2003, the other was held in Ontario, Canada, both of which were generously sponsored by Winchester Ammunition. For 2004 the IHEA

anticipates holding several Rendezvous in various locations (TBA) of the US, and possibly Canada and Mexico. Look for details on these future Rendezvous, as they become available, on our website at www.iheda.com.

EVP Comments, *Continued from previous page*

- The decline in hunter numbers is a serious problem and is going to get much worse as the baby boomers get too old to hunt. (two percent decline/year in the last 15 years and increasing in the last 5).
- This crisis is an important opportunity for us to add significant value to our agencies. We have the delivery system, we have the corps of dedicated trained volunteers, and we have a track record of success.
- Our common mission is to continue the hunting heritage through the development of safe, legal and ethical hunters. It would be irresponsible for us not to address this problem. (And irresponsible for our lead-

ers and supporters not to supply us with the resources needed.)

- The many methods to solve this problem have been developed, piloted and are ready to go. Alternative delivery/field day courses not only reduce barriers, they enhance the quality of our classes by allowing more time for live-fire, ethics discussions, and hands-on skill development.
- We have listened. We care. We know it will take money and time. We may have to let go of some of our old ways—but we are ready to move forward and get the job done!

We all want to make a positive difference in this world. Here is our golden opportunity.



4-H Shooting Sports Offer One Solution for Recruitment and Retention of Hunters

Articles By Delwin E. Benson, Ph.D.

Professor and Extension Wildlife/Youth Specialist, Colorado State University,
Colorado Hunter Education Instructor, NRA Certified Training Counselor

Prospective hunters have a new home with friends and family in 4-H Shooting Sports after taking a basic hunter education course.

Shooting enthusiasts too young to take Hunter Education might find 4-H Shooting Sports programs in the area to help them learn basic firearm safety and to get practice with shooting skills.

Some youth want to shoot, but hunting is not part of their desires or availability at the time, and 4-H Shooting Sports can help them to continue their interests.

Young hunters and shooters can look forward to a life full of personal enjoyment and a unique social pride if they find appropriate ways to stay involved with shooting and hunting activities. If opportunities for participation are not available, it is possible for youth to become discouraged and never reach their shooting sports potential.

State Hunter Education and 4-H Shooting Sports programs welcome youngsters into the shooting sports and help them to acquire knowledge about their interests, skills to perform properly and attitudes that demonstrate ethical considerations for the land, wildlife and people.

4-H provides a long-term training and support system that can take students who have been trained with the knowledge of basic hunter education to the next level where they can develop shooting skills over time within an

atmosphere of peer and adult mentors giving them an opportunity to think about their options for the future.

The process that one goes through to make decisions is known as the "Adoption/Rejection Sequence" which includes: Awareness, Interest, Evaluation, Trial, and then Adoption or Rejection.

The **Awareness Stage** is when people first learn of ideas, products or practices. The information could

come from media, family or friends and it is part of other messages that confuse and compete for brain time.

The **Interest Stage** is when curiosity is aroused sufficiently for persons to take notice and to start thinking about subjects.

Hunter Education students and 4-H Shooting Sports participants have some level of awareness and interest because they are attending training programs. More knowledge, skills and attitudes are gained as time goes by, only if they have an interest.

The **Evaluation Stage** is next, when the pros and cons of topics or

Continued on page 10



Working Smarter not Harder: More Communications and Joint Trainings through Hunter Education and 4-H Shooting Sports

The first step to get program administrators and volunteer instructors with 4-H Shooting Sports and Hunter Education Programs working together is to just ask.

Pick up the phone, call the respective organizations, and talk about mutual needs, programs and customers—the students.

Get involved in each others' programs. If a new approach is needed, make a plan. The job of hunter and shooter education is too important and too big for any one group or program to shoulder all of the pressure.

Many volunteer instructors for each program are actively involved in the other program already, so working together is not a new concept on the ground.

Step two for working smarter and not harder is to get coordinators and instructors learning and teaching together.

Many topics, which are covered in training for Hunter Education Instructors, are also valuable for 4-H Shooting Sports Leaders and vice versa. Examples follow from my experiences.

Hunter Education workshops about "Principles of *Continued on page 10*



4-H Solutions

Continued from page 8

activities are actively evaluated. At this stage, information, help, guidance, and other motivating factors are sought. Input from family, friends and related agencies are more important than media at this stage.

Hunter Education programs provide initial motivation, mentoring and opportunities. With 4-H Shooting Sports, hands-on activities that are conducted over time are essential.

The **Trial Stage** is also an action stage when people decide to get

involved. They may hunt or shoot within a limited number of activities or they might give many shooting sports a try.

Hunter Education programs let participants try the operation of basic firearm actions, practice ways to carry firearms, and experience live fire. Trained 4-H Shooting Sports instructors help youth to learn and become proficient at shooting and outdoor skills practices.

The last stage—**Adoption/Rejection**—is where the activity must pass the test. If participants have favorable attitudes based on preceding positive

experiences, then the activity might be adopted, and the participant has a true behavior change.

If the activity does not meet expectations, then the idea or activity is rejected. With hunting and shooting sports, rejection could be caused by a lack of positive feedback, costs, time, or an array of other problems.

With sufficient motivation and opportunities enhanced by Hunter Education and 4-H Shooting Sports, the new recruits wake up one day and decide that they too are hunters and shooters for life. †

Working Smarter

Continued from page 8

Learning and Teaching," "Hunter Ethics and Responsibility," "Principles of Wildlife Management," and "Home Study for Hunter Education" would be of value and interest to many 4-H Shooting Sports Leaders. Workshops about survival, map and compass, program coordination, risk management, recruitment and retention, and educational principles in both programs could easily be offered to Hunter Education and 4-H instructors simultaneously.

4-H trains its instructors at national, state and local levels about archery, hunting and outdoor skills, pistol, program coordination, range procedures, reloading, rifle, and shotgun. Many Hunter Education instructors would benefit from the same training.

Working more closely together might improve the quantity and quality of output overall, and program administrators with each program may find that working smarter is better than working harder.

Step three, communicating about opportunities offered by each to our clients, the students, is also rather easy but might require some joint thinking and local actions.

Every Hunter Education class can promote 4-H and other shooting programs, local ranges, clubs for youth and adults to join, and activities such as youth hunts, hunting seminars, etc.

4-H can do the same, making sure that their participants know about Hunter Education classes and other offerings of the state wildlife agency.

Hunter Education students can be asked if they want to sign up to be contacted about programs and opportunities once they leave the class, then those lists can be provided to 4-H volunteers and Extension Agents, local conservation clubs, ranges, etc., for follow-up. Follow-up from this should be expected and automatic, not a process to get around to later because the new recruits need attention and action to assist with their motivation and commitment.

Brochures and fact sheets created locally, and Internet sites developed at the state level, could summarize and update learning and teaching opportunities.

Perhaps agencies or organizations with funds could help to support cooperating agencies that have the people to create communications which reach youth—and adults for that matter—frequently and with good information.

Local hunting, shooting, and outdoor-related businesses could also become partners to support and fund local activities and communications.

Eventually, educational participants will become the hunters and shooters who benefit businesses.

This *Hunter & Shooting Sports Education Journal* goes to 65,000 Hunter Education instructors and it would serve the needs of 4-H leaders as well. We just need to find the way to get the *Journal* to them.

If 4-H Shooting Sports leaders become part of the Hunter Education educational force, then advertisers in the *Journal* have a larger audience to reach. Could that be reason alone to get the *Journal* to 4-H folks?

The International Hunter Education Association devotes sections in the *Journal* to meet the needs of hunters and shooters and will highlight specific Hunter Education or 4-H Shooting Sports.

Hunter Education distributes the *Hunter's Handbook* to more than 750,000 Hunter Education students annually in the United States, Canada and Mexico, and that publication is valuable for 4-H participants also. Perhaps we are on to something here. The bottom line with both programs is that these are educational programs for the students.

Those are a few ideas to consider for your state. What matters most is not what we say, but what we do!

Ask yourself what you can do to improve interaction between Hunter Education, 4-H Shooting Sports and other programs. Hunters and shooters will thank you. †



International YHEC... Hunter Education's Next Step

I'm sure that many instructors have had the same experience as myself—a class of young, excited, motivated Hunter Education graduates ready for the next step. When young graduates complete the Hunter Education program, they want to SHOOT and HUNT. To many instructors it is disappointing to realize that for many of these young people the opportunity to shoot or hunt is not likely to happen. There may be no parent or guardian interested in these activities, there may be no access to shooting ranges or hunting areas, or no mentoring programs available to graduates after the course.

Since 1985, the National Rifle Association's Youth Hunter Education Challenge, also known as YHEC, has offered just such an opportunity.

What began as an outgrowth of the Hunter Education curriculum in North Carolina in 1978, the YHEC program has grown to include nearly 50 states and provinces with more than 50,000 participants annually. North Carolina began as the North Carolina Hunter Safety Shooting Tournament between two high school Future Farmers of America programs. It quickly expanded from two high schools in 1978 to 79 high schools in 1983 with nearly 600 participants.

The YHEC program is designed to expand and improve the basic skills introduced in the Hunter Education course. Young graduates, through age 19, build and improve their shooting skills with .22 rifles and shotguns, as well as archery and muzzleloading equipment. Also included in the "eight challenges of YHEC" are skills in wild-life identification, orienteering, hunter safety trail, and a comprehensive written examination on a wide range of topics from hunter ethics and wildlife conservation to first aid.

Participants in the YHEC program are invited to participate in a

regional or state-level competition, which qualifies them to attend the NRA International YHEC event held each summer.

Safety is the first priority in all YHEC events. Lessons in safety learned in the Hunter Education program are reinforced in YHEC. The 10 Commandments of Firearm Safety are



The Youth Hunter Education Challenge program is designed to expand and improve the basic skills introduced in the Hunter Education Course.

THE 18TH ANNUAL YHEC was held last July at the NRA Whittington Center near Raton, New Mexico, with over 350 young Hunter Education graduates from all over North America.

After a week of fun competition in the eight challenges, the scores were announced. The junior individual champion was Jordan Blount of Artesia, New Mexico. Senior individual champion was Devon Babcock of Rome, Pennsylvania. In the team division, the junior championship went to the DeSoto Youth Sportsman's Gold Team of Louisiana, while the Pennsylvania Senior Blue Team took the Senior Team honors.

always followed in all shooting events. Participants are constantly practicing the rules of firearm safety as they compete under the watchful eyes of volunteer staff members, many of whom are Hunter Education instructors.

Just in case you think the competition is a piece of cake, the adult coaches are invited to participate at the International competition along with the young people. Most adult scores are not even close to what some of these talented youngsters achieve. The YHEC participants are some of the most accomplished shooters in North America.

Sportsmanship is always an important ingredient in YHEC competition. Normally, the Sportsmanship

Award is presented to the team most worthy of recognition. In 2003, the award was presented to the Kansas participants.

YHEC participants quickly make friendships. Patch and pin trading breaks the ice and long-lasting friendships are made, not only between young participants, but also with the volunteer workers and staff as well.

Since my involvement with the YHEC program in 1991, I have witnessed many young participants who have succeeded in these hunting skills. Many

of the young people I've had the opportunity to work with were youngsters who did not participate in school team sports. When given the opportunity to improve their individual skills in an area of interest (hunting and shooting—lifetime sports), they were amazingly successful. I've had parents thank me for the change in attitude and behavior in their son or daughter who became active in YHEC. I've enjoyed the success of seeing a Missouri youngster go on to become a member of the U.S. Olympic shotgun team. He found out he really liked the shotgun sports while participating in YHEC!

Chances are, your state or province already has an established YHEC program. You can find out by checking the NRA YHEC website at: www.nrahq.org/hunting/youthed.asp or call the NRA at 703-267-1500.

If you'd like to give your Hunter Education graduates an opportunity to go beyond the basic Hunter Education course and let them experience the challenges of YHEC, please make information available to them. A new Hunter Education graduate is ready and excited to go beyond the basic course. YHEC is the perfect next step! †

Jan Morris, a former IHEA Board member, is the Missouri State YHEC Coordinator.



2004 IHEA Conference to be Held in San Diego

The 2004 International Hunter Education Association Annual Conference will be held in San Diego, California, May 22-26, at the Town and Country Resort and Conference

Center in the heart of San Diego, minutes from Old Town, beaches, shopping, and family attractions such as Sea World, a Wild Animal Park, and the world-famous San Diego Zoo. Walk on the beaches, enjoy the local flavor, and take advantage of bartering for souvenirs in Mexico, just minutes away from San Diego. For information as it becomes available, please visit the IHEA website at www.ihea.com. †



2003 IHEA Benefit Shoot

The International Hunter Education Foundation held its Fourth Annual IHEA Benefit Shoot at the National Shooting Complex in San Antonio, Texas, June 3 and 4, 2003.

The IHEA Foundation consists of retail and manufacturing industries working together to support the activities and programs of the International Hunter Education Association. These programs and activities represent IHEA's efforts to continue the heritage of hunting and outdoor sporting activities worldwide by developing safe, responsible and knowledgeable hunters, and outdoor enthusiasts. The current IHEA Foundation Board members are: Mark Pentecost - representing Galyans; Brett Flaughter - Winchester Ammunition; Ron Freidenberger - Wal-Mart; Jeff Bergmann - Gander Mountain; Dave Cook - Stearns; Tom Floyd - Star State Investments; David Forbes - Hunter's Specialties; Sammie Knight - Mossy Oak/Haas Outdoors, Inc.; Scott McDoulett - Wal-Mart; Chris Paradise - Mossberg; Tom Patterson - Realtree; John Mullett - Bushnell Performance Optics; Mark Spangler - Plano Molding; Steve Upham - Crosman & Gameface Paintball; Trey Lichtenstein - Academy Sports & Outdoors; and Dan Fraher of Bass Pro.

The Benefit Shoot, along with other projects managed by the Foundation, helps the IHEA build a solid financial basis, enabling it to:

- Recruit and retain future hunters

and outdoor enthusiasts.

- Enhance the delivery of the hunter education program.
- Develop the instructional skills of volunteer instructors and professional staff.
- Improve the image of hunting and hunters.
- Strengthen the Association's leadership role in hunting.

The Benefit Shoot provided two fun-filled days of various shooting and outdoor sports. Day one hosted the Sportsman Challenge, including pistol, rifle, cowboy action, archery, laser and paintball shooting and bait casting competitions. Contestants competed for points in 10 different events to determine an overall champion. Providing a Hunter Skills Trail



Above: Ron Freidenberger helps young shooter Kati Pugh from Missouri with her shooting technique.

Below: IHEA Foundation Board members (back row, l-r: Tom Floyd, Dave Cook, Ron Freidenberger, and Mark Pentecost) with the Winchester Men's Team.

Competition were San Antonio Area Chief Russ Greiner, Instructor Al Pothast, and Area Chief Bernie Heer. Participants in this event received five bonus points added to their total score. Day two hosted the three-man team tournament, which consisted of trap, skeet, and sporting clays. Winning the event was Wal-Mart, second place was Remington, and coming in third was Winchester Ammunition. Trophies were awarded to both individuals and teams.

This year, Benefit Shoot planners also held a special free Youth Invitation Trap Shoot recognizing that today's youth are our hope for the future in the hunting and shooting



sports. Youth participants were also welcome to participate in the Sportsman Challenge at no charge. Live and silent auctions were held during the event. Industry retailers and manufacturers

donated very nice, high quality merchandise for the auction. Excellent catered meals provided the opportunity to share friendship and fellowship with all the participants. Tom Floyd, Chairman of Star State Investments, Inc. of Houston, chairs the IHEA Benefit Shoot Committee and has facilitated this event for the past four years. Tom and his wife, Jean, along with Ron Freidenberger, IHEA Foundation Treasurer and Wal-Mart Hunter Education/License Coordinator, hosted this year's event. Mark Pentecost, Senior Buyer with Galyan's Sports and Outdoor Adventure, Chairman of the IHEA Foundation Board and Dave Cook, President of Stearns, Inc., were both on hand for the event and provided excellent support. This year approximately 50 teams generated \$178,000 in cash and in-kind contributions for the Foundation. The Benefit Shoot will return to the National Shooting Sports Complex June 8 & 9, 2004.

For information regarding the 2004 IHEA Benefit Shoot, log-on to the IHEA website at www.ihea.com. †



Above: Sharon Curry from the Wal-Mart Ladies Team receives her individual trophy from Ron Freidenberger, IHEA Foundation Board member.

Below: Youth Shoot participant Mason Shaw receives his winnings from IHEA Foundation Board members Ron Freidenberger and Mark Pentecost.





Newfoundland and Labrador 2002 Hunter Education Instructor of the Year

Congratulations to Harrison Barney of L'Anse au Loup on being chosen as the 2002 Hunter Education Instructor of the Year for Newfoundland and Labrador.

Harrison is well known in his community and often goes beyond his duty to assist local residents and first time hunters to better understand hunting and firearm regulations and outdoor safety. Also, through his involvement in other local outdoor skills programs, Harrison has promoted Hunter Education training for youth and has had great success in teaching our young people to become safe and responsible stewards of our wildlife resources.

For his efforts Harrison received a framed "Continuing the Heritage" print from the province's Inland Fish and Wildlife Division and a Knight Wolverine II .50 calibre muzzle loader thanks to Knight Rifles. †

Harrison (center), wife Gay, and son Blaine.



Delaware Rendezvous

The Delaware Hunter Education Program, in partnership with the International Hunter Education Association (IHEA), hosted an International Instructor's Rendezvous at Camp Arrowhead on May 16, 17 and 18, 2003. The sun refused to make an appearance for the weekend but that did not dampen the spirits of the 63 hunter education instructors representing nine different states who participated in workshops all weekend designed to enhance their teaching skills.



Left, Sixty-three instructors attended the 2003 Delaware Rendezvous. Right, Eric Nuse, IHEA's newly appointed EVP, discusses the future of hunting. Photos courtesy John Sears, IHEA Instructor Board member.

Dawn Failing, Delaware State Hunter Education Program Coordinator kicked off the festivities Friday evening. Eric Nuse, newly appointed Executive Vice President of the IHEA, and John Sears, Instructor Representative Zone III, discussed the future of hunting and "Where To Go From Here." Sr. Cpl. Gregory Rhodes then did a presentation on Delaware's Operation Game Theft.

On Saturday evening the entire group let their hair down during "Carnival Night." Some of the shenanigans included an Antler Toss, Target Sling-Shot, Hunting/Fishing Trivia, Safari Hunting, Leap-Frog, Decoy Retrieval, and X-treme Bow Hunting.

Various workshops were presented throughout the weekend by a diverse group of Region 5 administrators and business professionals. Jim Tantillo from Cornell University presented "Hunter Ethics" and Dave Baskin from the NRA Disabled Services gave a powerful presentation on "Teaching Students With Special Needs." Bill Wolter and Betsy Archer (Owen's Shooting Preserve) demonstrated "Upland Bird Hunting with

Dogs." Eastern Mountain Sports presented "Map, Compass and GPS," while Dave Sanford and Gary Bennett (Connecticut Sr. Instructors) taught "Turkey Safety." Wayne Lehman (DE Wildlife Biologist) and Dawn Failing (DE Council of Wildlife Rehabilitator's and Educators) discussed "Wildlife Management and Diseases" at the same time George Roof (The Good Stuff Taxidermy) demonstrated "Proper Game Care."

"Teaching 101" was addressed by Vic MacCallum (MD State Coordinator)

and "How To Set Up A Field Day" was safely demonstrated by the Vermont Team of Volunteer Instructors, Rose-Ann Lombard, Gib Mach, Dick Bayer and Denis Jacques.

The Delaware Instructor's Rendezvous was the third to be held with previous ones being held in Kansas and Canada. Winchester Ammunition sponsored \$7,500 to help defray the cost of the event. Other key sponsors were The Delaware Division of Fish and Wildlife, Vermont Division of Fish and Wildlife, Massachusetts DNR, Maryland DNR, Safari Club International, Bass Pro Shops (MD), Kinsey's Archery Supply (PA), Deer Creek Equipment (DE), Taylor & Messick (DE), Black Bear Archery (DE), Eastern Mountain Sports (DE), and WaWa Foods (DE).

One participant stated after the workshop, "It's like learning to roll out a pie crust, never having done it before. I saw the magic come together." †

*--Dawn Failing, Hunter Education Coordinator
Delaware Division of Fish & Wildlife*





Bulletin Board

Ontario Hunter Education Hall of Fame

Ontario now has a newly created Hunter Education Hall of Fame that will recognize the contribution made to Ontario's hunting heritage and their hunter education program by individuals, organizations and companies.

The Hall of Fame will be located at the Leslie M. Frost Centre just outside Dorset Ontario. It was introduced and officially opened at the annual Hunter Education Conference in May by the Honourable Jerry Ouellette, Minister of Natural Resources. The introduction and opening



From left to right - Pat Hogan (Ontario Program Administrator), Joe Reid (MNR Program Co-ordinator), Bill McKittrick (Instructor and President of G. T. A. Association), The Honourable Jerry Ouellette (Ontario Minister of Natural Resources), Bill Blackwell (Chairman Hunter Education Provincial Advisory Committee Region 1), Dan Elliott (Representing Older Generation Hunters), and Sandra Kenney (Representing Younger Generation Hunters).

of the Hall of Fame culminates many months of hard work by Ontario instructors Bill McKittrick (former provincial coordinator for the MNR and President of the Greater Toronto Area Hunter Education Association) and Bill Blackwell (chair of the Hunter Education Provincial Advisory Committee and IHEA volunteer rep for Region 1).

While in the planning stages for the annual Conference and Rendezvous Bill McKittrick suggested that it would be nice to have a Hall of Fame where instructors could recognize their peers and others who have gone the extra mile for hunter education and continuing Ontario's proud hunting heritage. Bill and Bill decided that they would make the award a reality for their upcoming Conference and Rendezvous in the spring. Bill McKittrick entered into negotiations with the Frost Centre for space to locate the award and Bill Blackwell took on the task of getting startup funding for renovations, plaques, etc.

The IHEA was the first organization to come forward and offer

startup with funding from Winchester Ammunition. After that, many different organizations and individuals came forward with money and in-kind donations to assist with the building of the cabinets and articles for the displays. The one display cabinet will feature full-size manikins dressed in the old-time red-and-black checkered wool coat and pants, while a younger model will be clothed with modern garb and much of the high tech equipment in use today (see image). Articles such as manuals, badges, pictures etc., will be used as well, to show the past and how Ontario's program has evolved.

Two lovely plaques were built and donated by former Hunter Education instructor Ray Fenton of Port Elgin. Ray, an expert woodworker, built a plaque that will have the names of inductees placed on it and another to recognize individuals and organizations who make donations to the Hall of Fame and a proposed Hunting Heritage/Conservation Trail. The first inductee was Stanley Simons who was the Provincial Coordinator when the

mandatory Hunter Education program for all first-time hunters in the province was introduced.

In order to decide who future inductees will be, Bill and Bill turned a proposed set of guidelines and nomination form over to the Provincial Advisory Committee to refine. An individual or organization may be nominated by any resident of Ontario by requesting the Hall of Fame nomination form from the program administrator. At a yearly meeting the advisory committee will review all nominations that pass screening by the MNR and they will vote on a maximum of five to be inducted in any one year. Those who receive a two-thirds majority vote will be inducted at the Annual Conference each year. Their name will be added to the plaque and their picture placed in the Hall of Fame Gallery at the Frost Centre. Attendees at the May Conference/Rendezvous greeted the announcement with enthusiasm, as they will now finally have a way of recognizing the outstanding work and dedication by their peers. ✚

Rum River Chapter of MDHA Promotes Muzzle Control

The Rum River Chapter of the Minnesota Deer Hunters Association provides the Minnesota Dept. of Natural Resources Hunter Safety program to over 600 kids a years. One of the absolutely critical messages that instructors instill upon students is muzzle control.

We had the idea of getting an orange banner with the words "MUZZLE CONTROL" on it in bold black letters. We use it at all classes. It is a constant reinforcement to our muzzle control message. It is effective. When we ask the class what the two most important words in gun safety are, we get an immediate loud and clear "MUZZLE CONTROL!"

It has been so effective that we would like to provide these banners to other instructor groups. We can provide them at a very low cost by making an arrangement with a banner manufacturer for a large quantity.

For more information, please write to:

Larry Hokenson; President, Rum River Chapter MDHA,
24567 River Ct.; Isanti, MN 55040 ✚





IHEA Recognizes Outstanding Supporters

The IHEA is grateful to all of its supporters and is proud to recognize two outstanding supporters for 2002. This award recognizes any member of industry that has shown continued outstanding support of the IHEA and its Hunter Education effort, that has been active and innovative in fostering new ideas in Hunter Education and that, by virtue of personal staff efforts, professional advice or financial assistance, has helped the Hunter Education movement in a superior way.

Any industry can receive this annually. Both Henry Repeating Arms Company and Laser Shot, Inc. received this special award for 2002. +

Anthony Imperato, President of the Henry Repeating Arms Co., (middle) receives 2002 Industry Award from Terry Erwin, IHEA President-Elect (right) and Bob Mayer, IHEA Business Manager (left).



Photo courtesy Jimmy Caughron, TPWD Hunter Education Specialist



Steve White of Laser Shot receives 2002 Industry Award from Terry Erwin, IHEA President-Elect.

Photo courtesy Roger O'Dwyer, Texas Instructor



New "IHEA Hunt" Announced



WIN A HUNT OF A LIFETIME! The International Hunter Education Association Student/Instructor Hunt is a NEW opportunity beginning this year for students and instructors to go on an all-expense-paid hunt for big game and upland birds, fish for trophy rainbow trout, and be treated to some of the finest home cooking you will ever eat.

Four lucky students, one parent or guardian of each winner under 18, and two

Hunter Education instructors will be the guests of the exclusive J.B. Hunt Big Horn Lodge and Outback Ranch. This 3,000-acre ranch is located in southwestern Missouri among the hills and rugged countryside to provide the perfect sportsman's retreat. The lodge offers everything from a big screen TV, swimming pool and sporting clays, to deluxe accommodations.

The Outback Ranch harbors a wide variety of quality animals from turkey to Sika deer. The hunt should give students and you an opportunity to put your Hunter Education skills to the test.

Please have students complete the entry form on the card found in the *Hunter's Handbook, 12th Annual Edition*, between pages 24-25, and read all about it on page 25. Fill out all information requested, and don't forget the "parent/guardian signature" required for students. Please affix a stamp to the card and mail so it will be postmarked prior to February 15, 2004.

Or, if you have access to the Web, simply go to www.huntershandbook.com and to the IHEA Student/Instructor page. Fill out the form and email it no later than 2/15/04 to the address given there. The drawing will be held February 20, 2004, and winners will be notified immediately. The hunt will take place during the calendar year 2004 and include three days hunting and three nights lodging. +

Safety Alerts & Notices: CVA Recall Notice



WARNING — CONTINUATION OF 1997 RECALL
DO NOT USE CVA IN-LINE RIFLES WITH 1995 OR 1996 SERIAL NUMBERS
SERIOUS INJURY MAY RESULT

In 1997, Connecticut Valley Arms, Inc., voluntarily implemented a recall of in-line muzzleloading rifles manufactured in 1995 and 1996. If you currently own or possess a CVA Inline rifle with a 95 or 96 serial number, or you purchased one or gave it or sold it to another person, and the barrel has not been replaced, you should contact a Company representative immediately by calling the customer service number below:

1-770-449-4687 — (8:30 a.m. to 4:00 p.m. EST)
sample serial #61-13-xxxxxx-95 • sample serial # 61-13-xxxxxx-96

To identify the rifle, read the serial number on the barrel opposite the firing bolt. The only CVA rifles subject to the voluntary recall are in-line models with serial numbers ending with the last two digits of 95 or 96.

No other firearm models within the CVA product line are affected by the voluntary recall.

Blackpowder Products, Inc. purchased the assets of Connecticut Valley Arms, Inc. in May, 1999. Blackpowder Products, Inc. assumed no liability for any product manufactured or sold prior to January 1, 1998. Blackpowder Products, Inc. is continuing the Connecticut Valley Arms, Inc. recall, and will cover all reasonable related shipping charges. Please do not return your in-life rifle before contacting a Company Representative at the above customer service number.



The Hunting Incident Report

Tunnel Vision through Technology

By Tim Lawhern, Hunter Education Administrator, Wisconsin DNR

This article provides a “new” twist to restricted vision while hunting. Years ago not many folks used telescopic sights for hunting. Today, the vast majority of hunters using rifles have them equipped with scopes.

As Hunter Education instructors, coaches, evaluators, or trainers, we all know how easy tunnel vision can become a part of our hunts. We all caution our students about the effects of tunnel vision and how to avoid it. What many of us have not given much attention to is how changes in technology and hunting methods have caused tunnel vision to be inevitable. Read on to find out just what I mean.

Many of us that are about 50 years old or older remember the time when most of the firearms used for deer hunting were equipped with some type of open sights. In some

cases a peep sight, in others the typical blade front sight and V-notch rear sight. How many times have we observed hunters closing their weak eye in order to focus better on the sights with their strong or dominant eye? More often than not, I'd say.

You might now be asking yourself why this has become an issue. In Wisconsin, during the 2001 gun deer season, we had a fatal hunting incident of particular significance to this topic. A father shot his son in the back of the head from a distance of about three feet (one meter).

How could this happen you ask? Read on.

THE SCENE: This father and son (age 14) have hunted for the past couple of years from the same blind. The blind is located adjacent to a railroad track and just off the right-of-way. It is rectangular in shape, the walls are constructed of plywood, there is no roof, and two chairs are placed in the blind. The dimensions are approximately 4 feet wide by 10 feet long.

THEIR METHOD OF HUNTING: These hunters would sit in the blind and wait for a deer to come out of the brush adjacent to the railroad tracks. When one appeared, the son had the first chance to shoot and the father would “back him up.” If the son missed the deer, or if the deer did not immediately go down, the father would then shoot. This method was successful in previous seasons. The father also used a makeshift tripod for his rifle. When the father was in the shooting position, the rifle was slightly above the level of his son's position. In order for this to be comfortable for the father, and in an attempt to be safe, the father had to stand up in order to shoot using the tripod.

WHAT HAPPENED: A deer appeared from the brush. The son chose to take a shot, and the father prepared to back him up. The father

was using a large caliber, bolt-action rifle with a 3 x 9 variable powered scope. The scope was set on 9 power. The father closed his left eye; he was right handed, shot right handed, and was right eye dominate. He heard his son shoot and the deer did not go down. The father then took a shot. What happened was the worst nightmare imaginable! When the son fired his rifle, he raised his head from behind the scope to see the reaction of the deer. Because the father had his left eye closed and was looking through a scope set on 9 power, he did not see his son raise his head; the father thought he was shooting directly over the top of his son's head. (When I saw the photographs of the reenactment of this incident I instantly wondered how this young lad could hear anything since the muzzle blast from his father's rifle was always close to his head.) Remember the distance was only three feet (one meter) from the muzzle of the father's gun to the back of his son's head. The bullet entered the back of the son's head near the top of the skull and slightly left of center.

THE DILEMMA: Those of us that shoot scope-equipped firearms know that the focal plane is extended from the gun as the power of the scope is increased. Set on 3 power, we can

normally see the front sight, albeit blurry and slightly off center. As we turn the power ring to a higher power setting, we no longer can see the front sight. Even though the son was wearing a blaze orange cap, it was not visible in the scope set at 9 power.

THE LESSON: I think we would all agree that there were some things these two hunters did that none of us would condone. What we haven't given our attention to is what happens when hunters use modern technology, such as telescopic sights. Even with the added benefits of being able to better place your shot and identify your target, the field of vision is narrowed proportionally to the magnification setting. Additionally, as in the case of this incident, we lose vision of items close to us when we increase the power settings of our scopes.

As a conservation officer and as the administrator of the Hunter Education program, I am seeing more and more scopes of increased magnification capabilities being used for hunting purposes. Some even in the 20-power range. It might behoove us to spend a little time towards mentioning these issues to our students and our hunters. Perhaps by doing so we can save a hunter's life. †



iFAIMS Offers Access to USFWS Records & Information

By Otto Jose, Federal Aid Administrator for Region VI (Mountain Prairie), United States Fish and Wildlife Service

Hunter Education and many other conservation programs are funded, in part, through excise taxes on hunting and fishing equipment. A new Internet tool called iFAIMS has been developed to provide information on how those dollars are spent on conservation in your state and across the country.

Another government acronym, iFAIMS, stands for **Internet access to the Federal Aid Information Management System**. This is a record-keeping system used by U.S. Fish and Wildlife Service Federal Aid staff to record all grant information submitted by state fish and wildlife agencies. All activities funded by the Wildlife and Sport Fish Restoration Act are recorded within the system. As you become familiar with the iFAIMS, you will discover that Federal Aid administers many other grant programs that provide additional conservation of natural resources. (See Figure #1)

As a volunteer instructor, you will find iFAIMS very informative because the work you accomplish in Hunter Education for your agency is recorded in this system. You will see that your individual efforts help make up a national effort of training over 500,000 students annually to become safe and ethical hunters throughout the United States. By using iFAIMS, you will be able to discover many facts about the Hunter Education program. For example, you can learn how many students were trained during a given fiscal year. Or, you can find information on the amount of federal funds budgeted for operating the Hunter Education funds. You can also find out the number of instructor hours donated to the program.

The iFAIMS program contains a wealth of information on traditional Wildlife Restoration and Sport Fish Restoration programs but it doesn't stop there. You can also retrieve information on the multitude of other grants programs which include State Wildlife Grants, the Land Owner Incentive Program, Endangered Species, Neotropical Birds, and many more. As you become familiar with the system, you can explore the many different grant programs and see the efforts of conservation throughout the United States.

Information specific to Hunter Education includes a list of 12 activities that capture the accomplishments and the amount of funds expended during an annual budget. The activities include the following categories:

- Students trained
- Students live fire
- Advanced student training
- Volunteer hours of effort
 - Volunteers trained
- New range construction with traditional Hunter Education funds
- Ranges operated and maintained with traditional Hunter Education funds
 - Educational facility capital development; new range construction with Section 10 funds
- Ranges operated and maintained with Section 10 funds
- Other Section 10 enhancements
- Coordination and administration

How is the Hunter Education program information retrieved from iFAIMS?

First you will need to go to your computer to visit the iFAIMS home page at <http://faims.fws.gov>. This home page contains the following tabs: IFAIMS HOME PAGE; REPORTS; QUERY; and HELP (see Figure #1). To familiarize yourself on how to browse through iFAIMS click on the HELP tab where you will find directions. If you are totally unfamiliar with computers, partner up with another instructor who is a computer user to help you surf the site. The REPORTS and QUERY tabs will be most useful in retrieving specific Hunter Education information.

The REPORTS window (see Figure #2) includes 5 different topics about which you can retrieve information. The most useful reports for Hunter Education grant information are the NATIONAL SUMMARY OF ACCOMPLISHMENTS and STATE REPORTS. The NATIONAL SUMMARY provides a comprehensive list of accomplishments related to a specific grant program that were achieved in a particular fiscal year. For example, to find Hunter Education information you will click on the NATIONAL SUMMARY OF ACCOMPLISHMENTS then a query window will appear.

At this point you will need to choose WILDLIFE RESTORATION PROGRAM and a fiscal year. You will then submit the query, and the

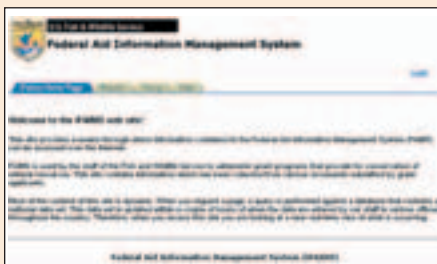


Figure #1



Figure #2

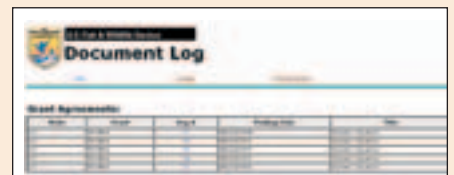


Figure #3



Instructor Discounts



Henry Repeating Arms Company is offering special pricing for instructors who wish to order Henry firearms for teaching. Models available are the H001, Henry Lever Action .22; the H001Y, Henry Lever Action Youth .22; and the H005, Henry Mini Bolt Youth .22. To order catalogs for your class, send your request to: Henry Repeating Arms, 110-8th Street, Brooklyn, NY 11215. Please include: date of class and quantity wanted; and name, address, city, state and zip.

Silencio Promotes Hearing Protection - Silencio, Inc. will be introducing their new Silencio Hunter Orientation Taskforce (SHOT) program developed to help promote the importance of hearing conservation to those just entering the world of hunting and shooting. Taskforce members may take advantage of special product opportunities, sneak-peek purchases of new products, and possibly outfit their entire class. If interested, call Silencio customer service at 800-648-1812 to get your name added to the mailing list.



For more information on these two programs log-on to www.ihea.com and click on Instructor Discounts in the Instructor Resource section.

Commemorating the 55th Anniversary of the **Daisy** Shooting Education Program, Daisy has made this limited edition

Daisy Outdoor Products

Announcing a Special Offer from the Daisy Airgun Museum!



The Daisy Museum Limited Edition Commemorative Avanti™ Champion 499
"The worlds most accurate BB gun."

available for \$99.95 plus shipping and handling. This production will be limited to 750 guns and will feature a laser engraved stock and forearm and will include an 18" X 24" poster with the American Boys Bill of Rights which has been featured in Daisy advertising since it was first written in 1948.

You can reserve your Commemorative immediately by phone, fax, mail, or at the Daisy website www.daisymuseum.com. For more information, contact the Daisy Airgun Museum at: # (479) 986-6873. +

computer will pull the data from the system. What you will then see are all Wildlife Restoration-funded accomplishments organized by specific activity description. Scroll down the window and you will find Hunter Education. If you want to see information specific to your state then you would click on STATE REPORTS.

Another option to browse for Hunter Education information is to use the QUERY tab. To make this exercise more meaningful, I will choose the state of Colorado Hunter Education program as an example. What follows is a step-by-step procedure to obtain Hunter Education information.

1. Select the QUERY tab.
2. Select the SEARCH OPTION.
3. Select the GRANT SELECTION CRITERIA and highlight the following: HUNTER EDUCATION ONLY grant program, the state of COLORADO and ALL AGENCIES, then click the SUBMIT QUERY button.
4. Almost instantly the GRANT LIST for Colorado Hunter Education program will be displayed. Now click on the blue colored link W-148-E.
5. The DOCUMENT LOG window will be displayed. In the Grant Agreement box, select the blue colored number 15 under the SEG # category (See Figure #3).
6. The GRANT AGREEMENT SUMMARY for Grant W-148-E, Segment #15 will be displayed which summarizes pertinent information (See Figure #4). Incidentally, the segment number indicates the number of years that funds have been used to support this grant.

can answer questions you may have regarding Colorado Hunter Education. For example, you may want to know when the grant agreement was active. You can see Segment 15 started July 1, 2001 and ended June 30, 2002. So how much money was spent that year for the program? You look down at the FUNDING box and you can see the breakdown between state and federal funds. You can read the OBJECTIVES AND BENEFITS narrative to learn what the Hunter Education program planned to accomplish. At the top of the page you can find more detailed information. If you want to find out what was accomplished in Segment #15, just click on ACCOMPLISHMENT DETAILS. The ACCOMPLISHMENT DETAILS provides a written narrative on the results of the grant segment, a list of accomplishments, and final cost.

Your tax dollars at work! Use iFAIMS to find out more about conservation program accomplishments in the U.S. +



Figure #4

The GRANT AGREEMENT SUMMARY



New Video Resource!

CONSEP Title 3: Wingshooting Shoot/Don't Shoot Situations

Just released September 1st: The third in our CONSEP Educational video series of wounding-loss-prevention videos deals with eight specific types of hunting behaviors that are known to contribute to excessive wounding losses. *VHS Run Time w/o credits: 33 min. 56 sec.*

The video uses vivid "real hunt" examples of hunting situations. We first show an example of the poor behavior, the problem is then clearly discussed as to why the behavior contributes to wounded birds, and then the correct way to handle the situation is visually described—again using real

hunting situations.

The video is set up to simulate "shoot/don't shoot" hunting situations. The eight specific types of hunting behaviors/situations include: Using improper loads (duck loads for geese); shooting at going-away birds beyond 30 yards; shooting beyond one's personal skill range; shooting at another bird while attempting to retrieve a downed bird; shooting beyond one's retrieval range; shooting at birds that will fall in heavy cover; shooting into large flocks; and shooting at front birds in flocks. This video contains a specific pause at the half-way point for instructor's discussion

purposes—or the video can be presented in its entirety. +

ALSO INCLUDED IN THIS SERIES ARE:

Title 1: The Wounding Problem; Three Causes & Three Solutions.
43 min. 45 sec.

Title 2: Proper vs. Improper Striking.
32 min. 19 sec.

For a CONSEP video order form, contact the IHEA at #(970) 568-7954 or log-on to www.ihea.com

CONSEP=Cooperative North American Shotgunning Education Program

New Database for Hunting Incident Injury and Fatality Research

Wildlife agencies and people interested in hunter safety will have a new tool to use to make hunting safer. The International Hunter Education Association (IHEA) and the National Wild Turkey Federation (NWTf) are developing a new database to track details of hunter incidents. The database will allow agencies to generate reports using any range of dates, hunting implements, species hunted, age, cause, severity, and more.

In the past, agency personnel, Hunter Education professionals, and safety experts have been frustrated by their inability to generate meaningful hunter incident reports. Even basic reports contained data that was two years old or more before it was available. Incident information is used to set hunting regulations, revise Hunter Education curriculums, testify in court cases, manufacture improved products, and justify hunting as a safe

activity to the media and the public.

The National Wild Turkey Hunting Safety Task Force efforts provide a good example of the use for the database. NWTf and agency personnel spent more than 1,000 hours collecting data and analyzing it for the first task force meeting almost 10 years ago. The process was repeated five years ago. Under the new system, task force managers will be able to accomplish the same task in a few hours. The work of the task force resulted in an unprecedented reduction in hunting injuries among turkey hunters. Ten years ago turkey hunting was statistically the most dangerous form of hunting and today it is one of the safest.

The database is being developed by Silvertip Productions. Silvertip personnel are analyzing state reports and entering the information into a database. There are many variations in agency reporting systems so the data-

base is frequently adjusted to account for different reporting methods. Once the system is refined, agencies will be able to enter their own data. Some agencies have indicated they will enter all their historical data as soon as the system is fully functional.

The goal of this project is to make hunting safer. The database is being developed with Wildlife Restoration Funds through a multi-state grant agreement. Multi-state grants are awarded through a process administered by the International Association of Fish and Wildlife Agencies.

As work progresses and incidents are analyzed, several news articles will be released and they will also be posted on the IHEA Web site at www.ihea.com. +

Contact: Jim Wentz, Silvertip Productions
614-834-9000 • jim@silvertip.net

Hunter Orange: Proving the Obvious

ORANGE NOT AS POPULAR THESE DAYS.

For years, hunter orange clothing has been just as much a part of hunting equipment as your rifle, shotgun or hunting boots. However, according to recent observations and at least one survey, this is changing wherever orange is not required by law. According to information on the IHEA website (there are lots of exceptions to hunter orange requirements; and seven Canadian Provinces and Territories, and 10 U.S. States don't have orange laws. With the increasing popularity of camouflage clothing, hunter orange may no longer be the standard for hunters unless the law forces them to wear it.



Deer have the equivalent of red-deficient color blindness in humans. This makes orange and green look very similar, as seen in the photo above (made with Vischeck color blindness simulation software). That's why hunter orange does not alarm deer. In spite of this, fewer hunters are wearing orange, seemingly unaware of how this affects their safety.

Most hunters know that deer and most other game animals (except birds and probably bears) are what humans would call red-green color blind, as well as being less sensitive to light at the red-orange end of the spectrum. They can't see orange and red colors the way we do, and they are not alarmed by motionless hunters wearing it. There is a ton of scientific evidence of this, plus the experience of millions of successful hunters who would not be caught in the woods without hunter orange.

Even so, many people notice that the hunters on TV, in magazines, and in the field are wearing hunter orange less. There is scientific proof, too. Surveys of hunters in New York, where hunter orange is not required, found that use of hunter orange by big game hunters rose from 81 percent in 1991 to 85 percent in 1996, but then fell back down to 81 percent in 2001. That's a five percent decline, and there was also a seven percent drop in the use of hunter orange for small game hunting. With the

By Wayne Jones, New York State
Hunter Education Administrator

use of hunter orange declining, it would be nice if we could tell hunters and our hunter education students exactly how much safer wearing hunter orange makes them.

Those numbers are not easy to find. It's common sense that a color that stands out like a neon sign to the human eye will make it less likely that another hunter would shoot in your direction. But some people—especially those opposed to requiring hunters to wear hunter orange—raise questions about the effects of hunter orange.

To answer those questions, New York State did an intensive study of hunting-related shooting incidents. The results answered those questions and established hard numbers proving the effects of hunter orange.

QUESTION: If hunters are required to wear hunter orange, won't a lot of careless hunters shoot at anything that is not orange, resulting in more non-hunters getting shot?

ANSWER: This question shows a very low opinion of hunters who have actually been reducing shooting incidents for many years. Beyond noting that 99.99 percent of hunters don't cause shooting incidents, the question is very easy to answer. Since 40 states have passed laws requiring hunter orange, if hunters were as careless as some people seem to think, all those states would have experienced increases in non-hunter victims after new hunter orange mandates. New York looked at the 32 states who had orange laws and also had detailed incident data before and after the legislation passed. Not even one of them had any increase in the number of non-hunter victims in the five years after requiring hunters to wear orange. (That kind of incident is very rare to begin with.) That's the kind of historical proof that answers the question, and should give the skeptics a higher opinion of hunters.

QUESTION: Some states with mandatory hunter orange have higher hunting injury rates than states with no such requirements. Does that mean hunter orange causes accidents?

ANSWER: To answer this, NY looked closer at the comparisons between states. States that had higher rates of hunting-related shooting incidents after they mandated hunter orange also had higher rates before they mandated orange, and those rates never increased after requiring orange. On the contrary, incidents decreased every time. That means that hunter orange laws certainly were not the cause for differences in injury rates. In fact, it does not even make sense to compare rates between states. There are hundreds of differences between states such as species hunted, length and timing of seasons, vegetation, terrain, and hunter density to name just a few of the most obvious. Blaming differences between states on any single factor such as clothing just does not make sense. For a more obvious example, would it be logical judge the effects of highway guard rails by comparing state-to-state accident rates? States like

Vermont with lots of guard rails have more cars sliding off the roads than states like Oklahoma with fewer guard rails. Does that mean guard rails cause increased accident rates? (Don't bother answering.)

QUESTION: Hunting-related shooting incidents are already rare. Can hunter orange really make that big a difference?

ANSWER: First, remember that one of the reasons that hunting injuries are rare is that most hunters wear hunter orange. Looking at the numbers scientifically, there are two valid ways to measure the actual effects of hunter orange on hunting-related shooting incidents. The first is comparing injury rates before and after mandating orange on the same turf. Yet even this has problems, because other factors can change from year to year, too. The second method is the best test—comparing injury rates of hunters who wear orange with those who don't wear orange in the same time and place. Calculate that you need detailed information about each hunting-related shooting incident (HRSI), AND a good measure of the percent of hunters

who do and don't wear hunter orange. The problem with this is that it's not easy to find good statistics of how many hunters in the population don't use hunter orange, especially if the law requires it. In New York, there are close to 700,000 hunters, and there are no laws telling them what to wear. As a result, you can expect honest answers when you ask what they wear to hunt. We already talked about the percentage of hunters who wear hunter orange. Here's what we found out about the differences in the injury rates of the two sub-populations of hunters—orange versus no orange.

Before and After Data: Every state that requires hunter orange reported a decrease in injuries when the orange requirement was enacted. That's no surprise. Along with the color requirement, there is generally a lot of public information about hunting safety, so it's hard to separate how much of the reduction was due to the direct effects of hunter orange and how much was due to more cautious hunters. An indication of this is that many states and provinces see a reduction in all kinds of hunting injuries—not just the visibility-related ones (victim mistaken for game and



victim in the line of fire when shooting at game). The important thing is that hunter orange works, but some might argue that a strong public information campaign is responsible for a big part of the safety improvement.

One experience, however, left no doubt about how much hunter orange was directly responsible for reducing

injuries. Prior to mandating hunter orange statewide, the state of Maine did a landmark five-year trial in one heavily hunted county. Maine required hunters in York County to wear hunter orange starting in 1967. Looking at only those injuries that could be directly affected by hunter orange, Maine found that York County

had 41 percent of the state's visibility-related incidents during the five years before the one-county orange requirement, but only 23 percent in the five years after. Even if some of the Maine hunters outside York County got the safety message and wore orange, the County where virtually all hunters wore it is where the big injury reduction occurred.

COMPARING INJURY RATES

BIG GAME HUNTING

(excluding bowhunting and muzzleloading seasons)

VISIBILITY-RELATED		Fatal Injuries			All Injuries		
Clothes	Hunters	No.	Rate	Ratio	No.	Rate	Ratio
Orange	2,787,866	1	0.04	1.0	12	0.43	1.0
No Orange	653,944	9	1.38	38.4	35	5.35	12.4

ALL 2-PARTY		Fatal Injuries			All Injuries		
Clothes	Hunters	No.	Rate	Ratio	No.	Rate	Ratio
Orange	2,787,866	2	0.07	1.0	36	1.29	1.0
No Orange	653,944	18	2.75	38.4	65	9.94	7.7

SMALL GAME HUNTING

(excluding turkey hunting and waterfowl hunting)

VISIBILITY-RELATED		Fatal Injuries			All Injuries		
Clothes	Hunters	No.	Rate	Ratio	No.	Rate	Ratio
Orange	1,630,369	0	0.00	1.0	8	0.49	1.0
No Orange	957,518	3	0.31	infinite	30	3.13	6.4

ALL 2-PARTY		Fatal Injuries			All Injuries		
Clothes	Hunters	No.	Rate	Ratio	No.	Rate	Ratio
Orange	1,630,369	0	0.00	1.0	25	1.53	1.0
No Orange	957,518	3	0.31	infinite	79	8.25	5.4

NOTES:

- Hunters generally do not wear hunter orange for bowhunting and muzzleloading, or for turkey and waterfowl hunting, so those figures were not included.
- Hunter numbers and injuries are cumulative, counted and added each year.
- Rate means injuries per 100,000 hunters in the category
- Ratio - Example: A big game hunter not wearing hunter orange was 7.7 times more likely to be shot by another hunter in the regular firearms season in New York between 1989 and 1993.
- Differences in fatality rates for small game hunting are not statistically significant ($P > 0.05$), due to the extremely small number of fatal incidents.

The figures above were part of a more general 1994 report entitled "Hunting Accidents in New York: Their Causes and Prevention." The report did not suggest that the victim of an HRSI is responsible for being shot. The figures were reported to demonstrate the effectiveness of hunter orange as a tool to help avoid being a victim of another's mistake.

Similar results for 1989-1995 data were published in the Center for Disease Control and Prevention's "Morbidity and Mortality Weekly Report" of October 18, 1996, but without injury rates. The report can be downloaded from www.cdc.gov/mmwr/preview/mmwrhtml/00044112.htm.

Comparing Injury Rates :

Orange Versus No Orange— The best proof is counting visibility-related injuries and knowing what each victim was wearing, as well as how many hunters wore orange and how many didn't. That allows us to compare injury rates of hunters who did not wear orange against those who did. Adding up these simple counts over a period of years gave New York clear, quantified answers about the effects of hunter orange. The results were part of a 1994 report using HRSI records from 1989 through 1993. See chart (left) for the results.

DRAMATIC UPDATE:

Short messages summarizing one important point are more effective than mountains of data in terms of affecting hunter behavior. New York hunter education staff combined the big game and small game figures about hunter orange (even though it is combining apples and oranges) to coin the phrase that "Hunter orange keeps you seven times safer." More recently, the figures about big game hunting fatalities in New York have provided an even more dramatic example to urge hunters to wear hunter orange, even if the law does not require it. This year, the *New York State Hunting and Trapping Regulations Guide* and news releases feature the following message.

"Don't be a victim! Four out of five NY big game hunters wear hunter orange. Since 1992, none of them have been mistaken for deer and killed. But 18 hunters who did not wear hunter orange were mistaken for deer and killed!"

Let's hope hunters get the message. Better yet, let's deliver it! †

I'm sorry!! I didn't mean to. I didn't see you!

By Lt. Michael Van Durme, Investigator Otto Tertinek,
and Wayne Jones, New York State Department of
Environmental Conservation

This is the most common statement made when one hunter inadvertently injures another. Over half of Hunting Related Shooting Incidents (HRSIs) are the result of the intentional discharge of a firearm at, what the shooter believed, was a safe and valid target. These incidents usually fall into one of the following categories:

- 1- Victim moved into the line of fire.**
- 2- Victim covered by shooter swinging on game.**
- 3- Victim out of sight of shooter.**
- 4- Failed to identify target.**

All of these fall into the larger group of "hunter's judgment factors." Conservation Police agencies do a thorough investigation of all HRSIs to determine the cause. This information is then used to update the training to help us all learn how to avoid the problems in the future. The real problem in most of these cases is the question of visibility. By carefully documenting exactly where the shooter and victim were, we can then look for the important answers. What could the shooter really see when he fired that shot? What did he think he saw? What was clearly visible, but went unnoticed?

Many things can affect a person's visibility: time of day, vegetation or forest cover, rain, snow or fog, and the eyesight and attention of the shooter. We have all found ourselves staring intently at an object without ever seeing the person who walked right up to us. The same thing happens when we are hunting. A person can become "locked in" on a deer, or what he thinks and hopes is a deer, and never notice that the deer is now lined directly up with his partner's stand. People also can convince themselves that they can clearly identify an object, because they want it to be a turkey or a deer, when in fact it is not. Let's look at some actual incidents as a way of discussing the problem and highlighting the solutions.

INCIDENT #1: Victim moved into the line of fire.

Two friends were driving along a highway and saw a flock of turkeys on some bottomland near a creek and railroad tracks. They drove back along the railroad tracks, parked their truck and walked along the tracks in an attempt to intercept the flock. The shooter stepped off into the woods between the tracks and the creek. The victim continued a little more than 100 yards further along the tracks and, then, also stepped off into the woods between the tracks and the creek. The victim said he watched the flock fly across the creek and make their way up the bank to the railroad tracks. The shooter stepped up onto the tracks when he saw the flock as they were crossing the tracks. He fired one round from his 10-gauge loaded with number 4-6 shot and the flock scattered. He then fired two



INCIDENT #1: The strings in this image show the left and right sides of the pattern, and the orange device shows the victim's position, over 100 yards away.

more times as the birds flew. The victim, whose attention was diverted toward the sound of the shot, turned and looked down the railroad tracks and was struck in the right eye by a single pellet.

The investigators of this incident used a measurement-of-visibility device to determine what the shooter could have seen when he fired at the turkeys. They placed the two-foot-square hunter-orange device where the victim was; and standing where the shooter was and looking at the victim's position, they could clearly see most of the orange device. The victim was in full view of the shooter, but his friend certainly did not see him before he fired.

The problem in this incident was the shooter did not know where his partner was. Their plan was to surround the flock which would have them shooting towards each other if they found the birds. They were 100

are." If you don't know where they are, don't shoot!

INCIDENT # 2: Victim covered by shooter swinging on game.

The victim in this incident was hunting on a 20-acre parcel that had newly planted trees that were protected by orange plastic construction fencing. The victim, who was wearing hunter orange had shot at a whitetail buck and missed. A short while later, he saw another hunter across the clearing aiming a shotgun at him and firing twice. He felt a sharp pain in his ankle and called out that he had been hit. The shooter said that he was walking along the edge of the clearing that had several trees surrounded with orange fences. He saw two deer, a buck and doe, run across the opposite side and he fired twice. He then heard the victim call out for help.

The reconstruction showed that the victim was 92 yards away and

orange because there was orange everywhere. This was a very unusual incident because the victim's orange clothing resembled items surrounding him.

The solution: Since the shooter did not know what was behind the running deer, he never should have shot. He could have avoided the incident if he were looking for a person in the line of fire, rather than depending on hunter orange to identify another person. Even where it is required, not every person wears hunter orange, and in this case, orange actually looked like part of the scene. In many cases where a person is in the line of fire, his or her clothing blends in with the environment. Thus hunters cannot always rely on conspicuous color alone to identify a person in the line of fire.

INCIDENT #3: Failed to Identify Target. Or sunrise, sunset: Is there really enough light to see?

A turkey hunter had worked the same big tom for several mornings, trying to get between the tom and the hens before the gobbler flew down from his roost. The hunter knew that if the tom got with the hens he would not respond to the calls for the rest of the morning. As it had done on previous days, the big bird gobbled several times, then flew down to the hens and was quiet. The frustrated hunter turned to walk back to his truck, planning to try another spot down the road. He had only walked about 30 yards when he was struck full in the face by a load of #4 copper-plated shot. After checking on the victim, the shooter ran a short distance to his own truck and called 911 on his cell phone. The call came in at 5:55 a.m. and sunrise that day was 6:01 p.m. Legal shooting time was 5:31 a.m. It was clear that the shooter had heard the gobbles of the big tom, had seen a movement from that general direction, and fired at what he said was a "gray object appearing to be a turkey in display." While the shot was fired within legal shooting hours, in the woods on that foggy morning, there was not enough light to identify the target clearly before the shot was fired.

The legal shooting time for most



INCIDENT #2 (above): The victim, in orange, was standing at the orange flag in the center of the photo. The shooter did not notice him because of all the other orange in the vicinity.

INCIDENT #3 (below) - 5:30 a.m. (left). The visibility device, as seen from the shooter's position. The center of the device, and the victim's face, were over five feet above the ground. Looking uphill, it looks like it is at ground level. Note the difference 10 minutes makes in the visibility, 5:40 a.m. (right).



yards apart, and both dressed in full camo, so they could not see each other.

The solution is: Always identify a safe target and safe target backstop. A basic part of this rule is, "Always know where your hunting partners

beyond several of the orange fences. The amount of hunter orange he was wearing was easily visible to the shooter, but the orange fencing made it less noticeable.

The problem was, the shooter failed to notice the victim dressed in



INCIDENT #3A: At 5:55 a.m. it looks like a hunter walking through the woods. The day before, in thick fog, the shooter shot at "A gray object appearing to be a turkey on display."



INCIDENT #4: The orange in the center is the two-foot-square measurement-of-visibility device, as seen from 62 yards away. At this distance it is impossible to clearly identify your target as a bearded turkey.

game is either sunrise to sunset, or at most one-half hour before sunrise to one-half hour after sunset. The legal shooting hours are restricted because it is unsafe to shoot when you can't clearly see the target and what is beyond it. The investigators looking into this incident needed to know what the shooter could have seen at the time he shot. They returned to the scene very early the next day and set up the measurement-of-visibility device at the victim's location. Then they went to the shooter's location to record, by video and photograph, what could be seen in the pre-dawn light. They were surprised to note that the bright hunter orange device appeared brown 10 minutes before legal shooting time, and bright orange 10 minutes later.

The problem was that the shooter never identified a legal, bearded turkey as his target. He also had parked next to the victim's truck, so he knew there was another hunter in the same woods. Finally, it was very foggy that morning, making it hard to see clearly, even objects only 24 yards away.

The solution: At both sunrise and sunset the lighting changes very quickly. Even 10 minutes can make a big difference in your ability to identify your target properly. Wait until you have a clear view and have positively identified your target. On foggy days, or when it is raining or snowing, your visibility is reduced so you must be extra careful about properly identifying your target.

INCIDENT #4: Failed to Identify Target. Or, too little orange looks red in the deep, dark woods.

A spring turkey hunter was set up behind some beech brush, next to a big tree. He was dressed in full camo and calling occasionally. Eventually, he saw another hunter walking towards him through the woods. Not wanting to scare away any turkeys in the area, he decided to signal the other hunter with the hunter orange lining of his hat. He took off his hat and waved the orange at the oncoming hunter who stopped and looked back at him with his binoculars.

At that point, the hunter raised his shotgun and fired at the man waving the hat, striking him with multiple pellets.

The investigation showed that the little bit of orange on the inside of the hat did not show through the branches very well. As a matter of fact, the shooter explained that as he was walking through the woods he was attracted to some movement. When he looked through his binoculars he thought he saw a turkey, and then a flash of red and what he thought was a beard. The next time the tom stuck his head out, he fired!

To document this incident, the investigators placed the visibility device inside the blind where the victim was sitting. From the shooter's position 62 yards away, they could see very little of the hunter orange device, only about 35 percent. They also noticed that what they could see appeared red, and not orange.

There were several problems that led up to this incident.

Problem #1: The shooter noticed a movement, thought he saw a turkey, thought he saw something red, thought he saw a beard, and so he shot at what he was sure was a tom turkey. In other words, he jumped to conclusions based on what he hoped to see.

Problem #2: The victim should not have moved at all when he saw another hunter, and should have called out to the hunter walking towards him. Only humans talk, there is no mistaking it. Any turkeys in the area were already scared off by someone walking through the area.

Problem #3: A little bit of hunter orange, seen through some branches, in the darkness of mature woods, looks red, not orange.

Problem #4: Even if there was a turkey, it was out of range. Successfully harvesting a turkey at 62 yards is very difficult, if not impossible. Even more important in this case is the fact that it is harder to positively identify a safe target when it is out of range.

The solutions: 1) Clearly identify your target, first assuming any noise or movement to be a human until you can positively identify the entire animal. Realize that ANYONE, even you, can jump to conclusions and imagine that a shape, color or motion must be what you are looking for. This phenomenon is so common it has a name: premature closure. 2) Speak out

when you see another hunter, and do not wave, move, or make any other sounds. 3) Never rely totally on hunter orange or movement to identify you as a human. 4) Never shoot at game that is out of range.

One other unique fact should be noted about spring turkey hunting. In this incident the shooter may have been attempting to stalk the calls of the victim. If he was, it was a classic turkey hunting mistake. In most cases, stalking spooks the birds, but more importantly, it sets the stage for trouble. In over half of the cases where a hunter is mistaken for a turkey, one of the hunters was attempting to stalk the other's call. About half the victims are stalkers and the other half are being stalked. Because of this, a turkey hunting lesson is catching on—"Stalking Stinks."

The thorough investigation of each of these incidents has taught us that visibility can be a very relative thing. In each case, a day of hunting

Studying the mistakes of others can provide valuable lessons in hunting safety, and there is much to learn to ensure your own safety or the safety of others. All hunters share some responsibility for their own safety and the safety of those around them. Ultimately, however, the person with his or her finger on the trigger must take responsibility for each shot. Virtually all hunting-related shooting incidents, both shooting mistakes and unintentional discharges, can be prevented by following the four basic rules of firearms safety taught at every hunter education course:

1. Assume every gun to be loaded.
2. Control the muzzle – point guns in a safe direction.
3. Trigger Finger – keep your finger off the trigger until ready to fire.
4. Target – be sure of your target and beyond.

ended tragically because someone failed to follow the basic rules of hunting safety. They failed to have a safe plan and to keep track of their hunting partners. They failed to be sure they had a safe backstop and they jumped to conclusions when they thought they saw game animals they were looking for. You must be sure that you can clearly see your target. Thinking something looks like the target is never enough. †

Lt. Michael Van Durme and Investigator Otto Tertinek work for the New York State Dept. of Environmental Conservation, Division of Law Enforcement. They have investigated many of these incidents and are lead instructors for teaching other officers how to conduct these investigations. Wayne Jones is the New York State Sportsman Education Administrator, responsible for scientific analysis of incident data. As avid hunters and Hunter Education instructors they also have a personal interest in keeping hunting the safe sport that it is.

Mistake a doe for a buck? A person for a deer? It could never happen to me!

By Eric Nuse, EVP, IHEA

How good of an observer are you? Quickly read the following sign and cover it with your hand.



Turn the page and write down what it said in the margin of your book. Now compare the two—are they exactly the same?

If you are like most people you missed the double "the." This is similar to what happens to a hunter looking for a buck. Mistaken for game shootings happen when a hunter only sees a few pieces of a deer and jumps to the conclusion that it is a deer. Most of the time they are right, but when they are wrong and have intentionally aimed and fired the results are catastrophic. Every year hundreds of intelligent and responsible hunters, just like you, get fooled.

Try this puzzle. Write down how many triangles you can find in the following graphic:



The definition of a triangle is a plane figure that is bounded by three straight lines and has three angles. So the answer is there are no triangles in this graphic. The human brain is pretty amazing. We ask it to find something and it does—even if it isn't there.

The take home message for your students is, you don't have to be crazy to "see" what is not there. Everyone can be fooled. I think the best way to drive this message home is to have them experience being fooled in a safe, controlled, non-threatening way, such as just happened to you. This is also a good time to relate a short, to the point, personal "war story". Such

as when you grew antlers on the stump near your tree stand and what you did next.

After experiencing the difference between perception and reality, your students should be ready for the following messages:

- Never shoot until you are sure beyond a shadow of a doubt that your target is safe and legal. The best way to do this is wait until it moves and gives you a new set of "pieces". Use your binoculars, move yourself, or wait for better light are also strategies you can use. One way to think of it is to assume every living creature is a person until you prove it differently.

- Hunt defensively—wear hunter orange, and if you see another hunter coming into your area—remain still, call out and let them know you are a hunter and where you are. Don't wave, whistle or make animal sounds. Remember safety first!

We can all be fooled. It is what you do after being fooled that makes all the difference between a great day in the woods and disaster. †

This article was adopted from the New England Hunter Education Manual, 2nd Edition with permission from Outdoor Empire Publishing.

Detectability and Visibility of Solid Hunter Orange Vs. Camouflage Hunter Orange to Human Observers

The following article is the result of a formal study recently completed by senior graduate students at the Southern California College of Optometry and supervised by professor, Dr. Walter Chase, a renowned authority on visual reception. The study was designed to determine scientifically if there is a difference in the detectability and visibility, by human observers, in clothing made from solid orange vs. camouflage pattern orange.

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ABSTRACT

Purpose: The purpose of this investigation was to determine if there is a difference in the detectability and visibility, by human observers, of clothing made from solid orange vs. camouflage-orange cloth.

Methods: Subjects: 53 adult subjects from 20 to 83 years of age volunteered as subjects.

Setup: The environment was a wooded area with a grassy clearing with pine trees as background on a clear summer evening. One target each of solid and camouflage Hunter Orange targets were hung on easel stands separated by 10 yards at a dis-

tance of 100 yards from the subjects. Targets were 216 inches square, the approximate size of an average male's torso. Procedure Subjects were instructed to identify the most detectable target of the two when abruptly revealed, and the most visible target on sustained viewing. Five to ten people were tested at one time for five trials each.

Results: For detectability, 79% found solid orange more detectable than camouflage orange on the basis of having a count of 3 or more out of 5. For visibility, 91% selected the solid target 3 or more times out of 5. Comments: In this study which simulates a stationary hunter, the solid Hunter Orange cloth sample orange was significantly more detectable and visible than the camouflage pattern. It remains to be determined if this finding is true over a wide variety of hunting environments and situations.

OBJECTIVE

The purpose of this study was to determine if there is a difference in the detectability and visibility, by human observers, of clothing made from solid orange vs. camouflage orange cloth. This study may provide valuable infor-

mation that is important to hunting safety and to the legislation of hunting laws. It could have impact on the 17 million people who purchase hunting permits in the United States each year. This project may also initiate other studies that ultimately result in safer hunting procedures and regulations that save lives.

BACKGROUND

The use of "Hunter Orange" garments is a safety measure. It is worn by hunters to increase their visibility to other hunters so that they will not be mistaken for game. The International Hunter Education Association (IHEA) and the Canadian Ministry of Natural Resources define "Hunter Orange" as "having a dominant wavelength between 595 and 605 nanometers, a luminance factor of not less than 40% and an excitation purity of not less than 85%." 2, 3

According to a 1995 survey supported by the IHEA, forty states in the U.S.A. and five provinces in Canada require hunters to wear Hunter Orange for big game hunting. All other states strongly encourage hunters to wear Hunter Orange. It should be noted, in those states requiring Hunter

Orange, that the amount, specified in square inches, and the type of garment vary according to state regulations. Most states require a total of 400-500 square inches to be visible on the chest, back, and head. Sixteen states and three provinces specifically require "solid" Hunter Orange. The remaining states and provinces either allow or do not make specific reference to camouflage-pattern Hunter Orange. Additionally, Maryland, Michigan, Minnesota, and Wisconsin state laws require a camouflage orange pattern to consist of at least 50% Hunter Orange.

Several studies have demonstrated that there is a lower proportion of hunting accidents among those hunters who wear Hunter Orange compared to those who do not wear Hunter Orange garments. In New York State from 1989 to 1995, of the 125 incidents in which hunters were mistaken for game, only six (5%) were wearing hunter orange. North Carolina laws requiring hunters to wear orange clothing have significantly reduced the number of deaths and injuries resulting from people being mistaken for game.

A relevant side issue is "how do deer and other large game animals see Hunter Orange garments?" Hunters want to know if wearing bright orange garments will reduce their hunting success. Historically, there are conflicting opinions about the ability of deer to see color. It has been stated that "these animals are completely color blind." This belief that deer are color blind, and therefore, cannot see Hunter Orange as humans do, may have helped promote acceptance for the use of Hunter Orange garments.

There is, however, a body of evidence that supports the belief that deer are capable of seeing color based on anatomy, electrophysiological

function, and behavior. Both light and electron microscopy reveal the anatomic presence of both rods and cones in the retina of white-tailed deer. ⁶ Electroretinogram (ERG) photometry, conducted on two species of deer, has demonstrated the presence of rod and cone cells with maximum sensitivities at 497 nm and 450-460 nm respectively. ⁷ Behavioral studies have shown that deer can be trained to discriminate color stimuli, providing evidence for the presence of color vision. ^{8, 9}

Although humans have three types of cone cells to provide color vision, carnivores and ungulates, including deer, have a color vision that is based on only two types of cone cells. ¹⁰ This simplified type of color vision would result in a difficulty distinguishing colors of objects that reflect light in the middle-to-long wavelengths (green, yellow, orange, and red.) For a deer observing a hunter, this implies Hunter Orange would provide no contrast against the surrounding field environment. However, these animals have an excellent ability to detect blue and UV light that is filtered out by the human lens. A hunter who wears garments that are highly reflective of UV light may be more visible than one whose garments do not reflect UV. ¹⁰

Among hunter education associations and state hunting agencies, the use of Hunter Orange clothing is broadly accepted as a means of making a hunter more visible and detectable to other hunters. To our knowledge, however, there have been no studies, reports or surveys to date that specifically evaluate the visibility, and thus the safety, of solid versus camouflage-pattern Hunter Orange garments. Nevertheless, manufacturers of hunting garments are producing and marketing a vast selection of

camouflage Hunter Orange garments and state agencies are implementing or perpetuating hunting garment regulations. This may lead to more accidents and injuries in the field, as hunters assume they are visible safe enough to other hunters. Therefore, a scientific study evaluating solid and camouflage Hunter Orange is needed.

METHODS

Subjects: We recruited 53 adult subjects to voluntarily participate as subjects in this study. We used a sample of convenience for enrolling subjects who were individuals who had come to a wooded picnic area for their own relaxation. Subject ages ranged from 20 to 83 years with the mean being 38.7 years of age. There were 30 males, 20 females and 3 subjects who did not indicate their gender on their answer form. Subjects were not screened to determine visual acuity or color vision defects, just as hunters are not screened when they purchase a hunting permit.

Setup: One target each of solid and camouflage Hunter Orange targets were hung on easel stands separated by 10 yards at a distance of 100 yards from the subjects. The cloth, donated by the IHEA, was consistent with the definition of "Hunter Orange" as previously stated. The camouflage target was approximately 50% hunter orange and 50% gray and green splotches. Each target measured 216 inches square, which is the approximate size of an average male's torso while wearing a coat. The study was conducted on a grassy clearing with pine trees as the background on a clear summer evening.

Procedure: Each subject was shown the location of the targets and instructed to identify which target (right or left) was (1) most detectable

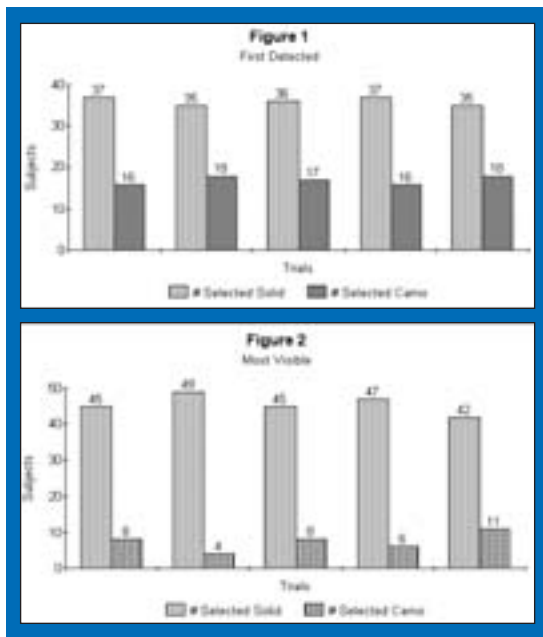
immediately upon removal of a cardboard blind and (2) which was most visible upon sustained viewing. After the subjects had obstructed their view, the targets were switched in a predetermined sequence. The subject then uncovered his/her face, viewed the target, and recorded a response. This was repeated for five trials. For efficiency purposes, subjects were tested in groups of 5 to 10 people at one time.

RESULTS

Figure 1 compares graphically the numbers of subjects who selected the solid target and the camouflaged target immediately after removal of the blind on each of the five trials. For each subject, the number of trials on which the solid target was first detected was determined. These counts range from 0 to 5, but the median is 4, with 79% (42/53) of the subjects having a count of 3 or more, and 53% (28/53) having 4 or 5. If there were no bias toward the selection of the solid or camouflaged targets, the distribution of these counts would have been centered near 2.5. The observed median of 4 is significantly greater than 2.5 (Wilcoxon signed rank test, $W = 1181$, $P < .0005$). The median counts for male and female subjects were 3.5 and 4, respectively, which were not significantly different (Mann-Whitney test, $W = 541$, $P = .53$).

Figure 2 graphically summarizes the “most visible” data—that is, the numbers of subjects who selected the solid target and the camouflaged target after sustained viewing. For the 53 subjects, the median number of solid target selections on the five trials was

5 with 91% (48/53) selecting the solid target three or more times and 85% (45/53) having four or five solid target selections. The median of 5 was significantly greater than 2.5 ($W = 1399.5$, $P < .0005$), and the male and female medians, 4 and 5 respectively, were significantly different ($W = 626.0$, $P = .010$).



COMMENTS

Analysis of our data shows a solid Hunter Orange cloth sample, which simulates a stationary hunter, is significantly more detectable and visible than a camouflage pattern Hunter Orange cloth. Further studies are necessary to determine if this remains true over a wide variety of hunting environments, weather conditions and times of day.

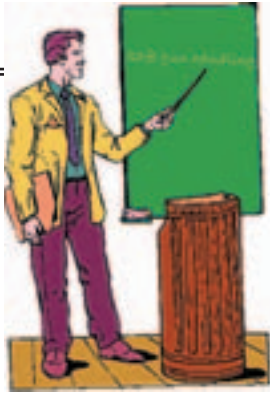
If deer and other game animals do indeed have a limited range of color vision, bright orange would not likely stand out to these animals as it does to humans. Rather, hunters should be more concerned with an animal's ability to see ultraviolet that is reflected from hunting garments.

It is difficult, if not impossible, to

predict by how much safer a hunter would be using solid-orange garments. It is our opinion, however, that any safety measures that reduce preventable injury and death outweigh the potential gains of acquiring more game through the use of camouflage pattern orange garments. †

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Teaching 101

Target Identification

By Tim Cameron

I teach several courses including Hunter Education, Firearm Safety, Bowhunter Education and Trapper Education. The topic of seeing and being seen is a critical one to ensure everyone is safe and shows respect for game and non-game species. I would like to share a teaching tip in this regard. It initially came from the International Bowhunter Education Program.

Proper target identification is vitally important for all hunters. To begin this part of the lesson, I quickly pass signs with three common phrases in front of the students. The word arrangement is important.

**“Look before you
you leap”**

**“Once in a
a lifetime”**

**“A bird in the
the hand”**

Once I have removed the phrases from their view, I then ask the class to tell me what the signs said. The reply will be “Look before you leap, Once in a lifetime, and A bird in the hand.” I will inform them they were wrong and we will try it again, showing the signs and repeating the question. Usually, after several tries someone will identify the inaccuracy and tell the class.

Now the learning process for the students begins.

First, we explore why the class could not catch the real wording on the signs. These are all common phrases they have seen before, so their minds automatically fill in the blanks to create phrases that make sense. Their minds drop the repeated

words and the students never notice the difference. To transfer this to a hunting situation just think of all the magazine articles you have read with a picture of a deer, bear, moose, or other game animal you are hunting.

How many television programs have you seen with pictures of the animals you will be hunting? How many 3-D targets have you shot at with your bow or electronic shooting simulators? What this media has done is to create in your mind a “common phrase” for your image of a game animal.

Now to make the lesson hit home personally to each student in the class:

When you are out hunting in the woods and hear the twig snap—what goes through your mind, what question do you ask yourself? When polling the class the usual response will be “Is it a buck? Is it a bear? Is it...?” and they continue to list game animals.

This is the trap that many hunters fall into. They inadvertently prepare their mind to see that “common phrase” or common image of the game animal they are seeking. They are now trying to apply that noise, movement or shadow to the image in their mind. They fail to realize, as they

did with the three simple phrases, that their mind is now searching within for every image of a game animal and filling in the blanks to make this noise, movement, or shadow fit that image. This is a mistake. This is how accidents happen. The proper question to ask yourself is “What is it?” This should leave an open or blank image for your mind to interpret the noise, movement, or shadow for what it is instead of what you want it to be. Once you know what it is, then and only then can you determine if it is a suitable target.

**“Look before you
you shoot”**

Always be sure to ask “What is it?” This is just a small part of the lesson on game identification and safety; but I feel this interaction in the classroom does cause the students to think. This, I hope, will lead to thinking in the field and safety for all concerned. +

Tim Cameron is Program Coordinator of Development and Outdoor Education for the Fish and Wildlife Branch Department of Natural Resources, New Brunswick, Canada.

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Wild Game Recipes

Venison with Bacon Sauce

Daryl Crimp
Journal, Fall 2003

Ingredients:

- 1 kg (2.2 lb.) of venison cut into medallions
- 1 onion, diced
- 1 teaspoon of minced garlic
- 4 rashers (slices) bacon, diced
- 1 cup of diced mushrooms
- 1 cup of stock
- 2/3 cup of cream
- 1 tablespoon of butter
- 1 tablespoon of oil
- Salt and pepper seasoned to taste

Preparation:

In a large pan heat the oil and butter. When the butter is foaming cook the medallions for 2 minutes on each side or to the required degree. Remember, venison needs to be cooked quickly over a high heat in order to seal in the juices—but not overcooked. Remove to a warming dish.

In the same pan that you cooked the venison, sauté the onions, garlic, mushrooms, and bacon until tender. Add the stock and bring to a boil. Gradually stir in the cream and season to taste. Allow to simmer vigorously until reduced by half. Top medallions with the sauce and serve immediately.

Recipe courtesy of Daryl Crimp, AKA the Mad Chef, New Zealand



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Chicken Fried Venison Back Strap

Terry Erwin
Journal, Fall 2003

Ingredients:

- 1 venison back strap sliced into 1/2-inch thick slices. (Remove all sinew and butterfly)
- 2 eggs
- 1 cup of whole milk
- 2 cups of flour
- Fajita seasoning with Mesquite flavoring

Preparation:

Combine (beat) eggs and milk in a bowl to make a wash for the backstraps. Season the backstrap slices on both sides.

Dredge the backstraps in the milk wash, and then flour both sides. Cook in a deep fryer or in a large skillet (you need at least 3/4 inches of oil) until golden brown. Remove and drain. Do not overcook. Make a cream gravy and serve with mashed potatoes and peas or whole kernel corn. Serves 4 to 6 people.

"Tastes so good, it will bring a tear to a glass eye!"

Recipe courtesy of Terry Erwin, Hunter Education Coordinator, Austin, Texas.



Attention Hunter Education Instructors! Do you have a favorite Wild Game Recipe?

The IHEA is putting together a Wild Game Recipe Cookbook that will be made available to the public through popular outdoor retail stores in 2004.

We are currently soliciting recipes from our Hunter Education Instructors in Canada, Mexico and the United States. If you have a favorite or unusual recipe (or recipes) that you would be willing to share in this publication, please send it (them) along with a short biography about yourself (name, state/province, number years as a Hunter Education Instructor) via email to: supplysvcihea@frii.com; or via regular mail to: IHEA, Wild Game Recipes, P.O. Box 490, Wellington, CO 80549

Donors who contribute recipes that are chosen to be published in our Wild Game Recipes Cookbook will receive a free copy of the cookbook. Proceeds from sales will go directly into Instructor development and IHEA program resources.



IHEA Patches, Part II

Rendezvous patches. Although IHEA previously held rendezvous events in Nevada and New Mexico, it wasn't until 2001 that the first Rendezvous patch was issued. Note that the 2001 patch, although dated, does not indicate the place, which was again in Nevada. All patches now name place of event as well as date. In 2003, IHEA sponsored two instructor rendezvous events, one in Ontario and another in Delaware. More are planned for the future.



Conference patches. To the best of my knowledge, there have been only two patches created to commemorate annual IHEA conferences. The first was 1996 in Sunriver,



Oregon. The second was for the 2002 conference held in Springfield, Missouri. The Missouri event patch, created by the Missouri Department of Conservation, depicts Lewis and Clark.

Fund raising shoot patches. In 2000, the IHEA Foundation held the first fund raising shooting event at Linn Creek, Missouri. A special patch was created (by this author) in commemoration of this event. In 2001 and 2002, the event was moved to San Antonio, Texas, and the same



patch design was used with the exception of changing the colors and date. Although the event was again held in 2003, no patch was created for this year.



Ten Commandment patches. In 2000, Dr. David Knotts asked this author to design the first of a series of patches for the 10 Commandments of Firearm Safety. The first design "Always Point the Muzzle In A Safe Direction" was created with proceeds of the sales designated for the IHEA Endowment. A certificate of authenticity was issued with each patch sold. Each patch is identified with the year of issue. This author also designed the second and fourth issues of the series. Dr. Knotts provided the third issue



design. The first two commandment designs were also released as hatpins packaged with commemorative knives by the Imperial Schrade Corporation (with an issue of 25,000) and sold exclusively through Wal-Mart stores prior to Christmas. IHEA produced a pin of the 3rd (2002) and 4th (2003) designs. This patch and pin series will continue through 2009 with the last of the 10 Commandments.

Many of these IHEA patches are still available, please contact the IHEA office at # (970) 568-7954 or email the IHEA at info@ihea.com for details. +

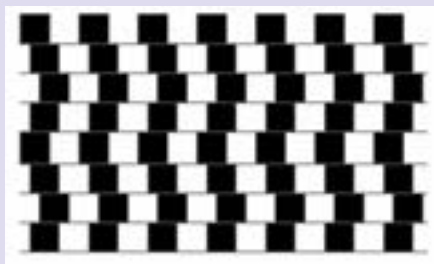
Author Jan Morris is a former IHEA Board member, avid patch collector, and Executive Officer for the Missouri Hunter Education Instructor's Association. He can be reached at JGMorris@aol.com or P.O. Box 38, Imperial, MO 63052.



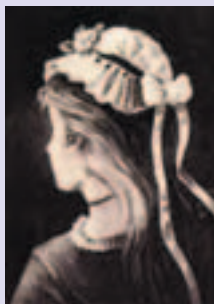
Mind's-Eye Openers

Purpose: To help your students achieve the awareness needed to identify mistaken-for-game situations.

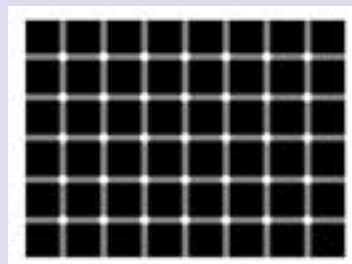
Visuals such as the optical illusions shown here can be quite a mind's-eye opener in a classroom. For example, the old woman /young woman drawing can be utilized quite effectively. Show half the group the line drawing of a young woman, the other half an old woman. Have them study it for a while, then show the whole group the drawing. It will be much more difficult to see the image that they were not originally imprinted with. Talk about the role of the mind in "seeing" and how what you are looking for affects what you see. This can be related to deer hunting.



Are the horizontal lines parallel, or do they slope?



Old Woman... or Young Girl?
Hint? The old woman's nose is the young girl's chin.



Count the black dots.

Think about the image on the cover of this *Journal* issue, this could be a classic mistaken-for-game scene. A hunter asking his brain to find a deer could easily turn the hunter rattling the antlers into a deer. Then imagine the same scene with the hunter holding the antlers dressed in hunter orange, thus breaking the mindset. Just talking to your students about being 100% sure is not enough.

Having students "fooled" in a safe setting by seeing a deer in a picture, when in fact there is no deer, reinforces the safety law of being 100% sure before shooting. Adding hunter orange to the same visual should demonstrate the value of wearing hunter orange and how it can keep the student safe from the less responsible hunter. They first need to experience this mindset dilemma — then they can understand and change their awareness and behavior. Utilizing mind's-eye opener visuals will effectively help your student experience "premature closure" and "early blur" as it relates to game identification and achieve the awareness needed to identify mistaken-for-game situations.

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