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*Commentary*

# Successes and Challenges of University First Hunt Programs

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**ABSTRACT** Wildlife professionals are tasked with sustainably managing habitats and wildlife for the benefit of a variety of stakeholders, and hunters are an important user group. But the number of hunters in North America has continued to decline, and as a result, new wildlife professionals entering the field are less likely to be hunters than their predecessors. We find this trend concerning because future wildlife professionals would be better equipped to manage wildlife resources and develop policies if they understand the motivations and culture of the hunter constituents supporting their work. To address this trend, we have developed collegiate hunting experience programs at the University of California Davis (UC Davis) and Louisiana State University (LSU), USA, wherein undergraduates in wildlife programs are provided with the education, training, equipment, and opportunity to hunt waterfowl and deer. The hunting experience is transformative for our students, resulting in a deeper connection to the wildlife resource, and a richer understanding of hunting culture and hunters' stewardship of wildlife habitat. In the 2 programs, we have encountered challenges (e.g., timidity around firearms), and opportunities for expanding our reach to broader segments of society (e.g., leveraging social media). The relative success of our programs indicates that the possibility for implementation of similar opportunities elsewhere is high, and may provide new ways for private landowners, non-governmental organizations, and corporate outfitters to engage in undergraduate education. 

**KEY WORDS** college, education, reactivation, recruitment, retention, shooting, student, youth.

The continuing success of the North American Model of Wildlife Conservation (Model; Geist 1995, Mahoney and Geist 2019) relies on a constituency and policy leaders actively engaged with wildlife and habitat resources (Organ et al. 2012). The Model tenets were implicitly and explicitly derived around the recreational interests of hunters (Heffelfinger and Mahoney 2019), and although wildlife management has slowly shifted towards a more inclusive stakeholder paradigm (Decker et al. 1996, 2019), hunters remain an important and engaged user group of wildlife resources (Decker et al. 2012). Hunters support millions of hectares of wildlife habitat on public and private lands that facilitate broader wildlife conservation, and the funding from licenses, taxes, fees, and voluntary contributions enhances their conservation efforts (Vrtiska et al. 2013). But the proportion of North Americans who hunt has declined since the 1970s (Heffelfinger et al. 2013, U.S. Department of the Interior, U.S. Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau 2016, Government of Canada 2019), which will have far-reaching repercussions for the wildlife profession (Duda et al. 2010).

Declining hunter numbers means that fewer new wildlife employees arrive in our profession with a hunting background. Our informal surveys of college students enrolled in wildlife programs at the University of California Davis (UC Davis) and Louisiana State University (LSU), USA, indicate a low (and declining) number of active student hunters. As faculty and professionals tasked with training the next generation of wildlife professionals, the low level of hunting engagement is worrisome. Future wildlife professionals benefit from gaining firsthand experience with the tools and skills needed to successfully hunt, and by actually hunting at least once they will be better able to understand the motivations of some of the constituents they will

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eventually serve. Across nearly all professions, practitioners are not deployed without gaining relevant practical experience and an understanding of the cultural context as it relates to their work. Wildlife students are better prepared for jobs in wildlife management if they can relate to the hunting community, which is a major stakeholder group (Decker et al. 1996). We are concerned that students could graduate from a wildlife program without any understanding of hunting and the substantial role that hunters play in the wildlife management enterprise (Krausman et al. 2013). Yet those same students may go on to careers tasked with managing natural resources and implementing policy that affects wildlife recreation and conservation.

Our objective is to outline and describe 2 college hunting programs provided to UC Davis and LSU wildlife students that began independently in 2008. We address common opportunities and challenges that we have encountered, and describe how the divergent cultural and regulatory environments of our respective states have shaped the implementation of the programs.

## A Common Philosophical Approach

Our university hunting programs arose independently but were generated around a common philosophical axiom: future wildlife professionals benefit from understanding the worldview of the constituents they will serve. When students make the choice to harvest an animal and reduce a public-trust resource to private possession, that activity represents a fundamental and seismic paradigm shift in how they view the wildlife resource. New hunters are interjected abruptly into a food web that they had heretofore ignored, and are forced to take full and immediate ownership of the decision to harvest an animal. That degree of moral responsibility is shared throughout the hunting community, and establishes a common bond among those hunting sustainably. New wildlife professionals also gain credibility with the hunting constituency when they answer affirmatively to the question of "do you hunt?" The hunter knows that the other party understands their passion and motivation, and does not stand in judgment of something they have not experienced. It is a small but powerful and immediate symbol of trust. The primary goal at UC Davis and LSU is to introduce our students to the hunter's perspective. At LSU we have developed a secondary but equally important objective of recruiting new hunters, and we later describe why college students may be a particularly receptive population.

## UC Davis

Before the hunt program was offered to UC Davis students, the California Waterfowl Association (CWA) had focused hunter recruitment efforts on youth from families supportive of hunters. These efforts were later expanded to target more diverse audiences, which was necessitated by the realization that recruiting enough new hunters to replace those being lost would require addressing a broader constituency. Additionally, CWA felt that stiffening public negativity towards guns and hunting was a growing concern that needed to be offset with aggressive educational efforts to train future influencers across different segments of society. Thus, students in universities with wildlife programs were ideal for focused engagement activities.

The hunting experience program offered to UC Davis students leverages connections with CWA and a private duck club owner to provide a full weekend (camp) experience. The UC Davis program targets senior undergraduates who have never hunted (this is a prerequisite) and have taken courses in game bird ecology and management. Interested students are required to fill out an application, the most important part of which is an essay that describes why they want to gain experience hunting and how such an experience might prepare them better for a career in wildlife conservation. The camp was not intended as a hunter recruitment effort but rather as a professional education and career preparation opportunity. Most students apply from within the wildlife department, with an average of 30–45 applicants for 15 available slots (typically filled with ~70% women, reflecting the current percentage of women in the wildlife major).

During early years of the program, hunter safety was taught on-site, but that proved onerous and time consuming. Now, students complete most of the course online before arriving for the weekend, which allows on-site lessons to focus more on hands-on training of rifle, bow, and shotgun handling, field safety, and shooting skills. Students take their final exam, and hunter safety permits and waterfowl hunting licenses are issued at camp. Notable problems encountered during early years included students who only wanted to observe hunting but not participate, and students who dropped out of the program at the last minute. To solve this, students are now explicitly asked to participate fully (going into a blind with the intent of harvesting a duck) as part of the application process, and are charged a non-refundable $50 up-front fee by CWA for meals and other expenses to ensure that they are serious about attending (although the entire cost of the camp is >$300/student with licenses, meals, shells, and other hunting gear provided). Faculty at UC Davis and CWA felt it necessary that students were willing to participate fully in every aspect of the hunt and to face the difficult decision of shooting to take an animal's life. That act represents a fundamental challenge for most students, but it is transformational and it signifies a true measure of commitment and engagement as an active participant in sustaining our natural resources.

The camp is not offered by UC Davis but rather by CWA who generously provides it for UC Davis students. Importantly, the CWA handles liability coverage, logistics, and organization during the weekend. Students arrive at the duck club on Friday evening and are instructed on basic gun handling on a variety of guns with different mechanisms (Fig. 1). Saturday morning, they practice duck and bird identification in early morning light conditions. The rest of the day includes outdoor shooting sport instruction: students shoot pellet guns, learn basic archery, and have hours of intensive 1-on-1 training shooting sporting clays (Fig. 2). Training and hunting mentorship are provided by wildlife professionals from California affiliated with a variety of

**Figure 1.** Students from the University of California – Davis learn how to handle firearms from a faculty member at Bird Haven Ranch, California, USA. Photo by Wayne Tilcock.

agencies and non-profits, which provides the students with an invaluable professional networking opportunity. The evening ends with a game processing workshop, cooking demonstration, and group dinner where students interact freely with the senior wildlife professionals; for many students, that alone is an outstanding experience.

On Sunday morning, students participate in 1-on-1 mentored hunts with those same professional biologists. The mentor-guide helps with further training in firearm use and hunting skills, and over the course of the 3-hour morning hunt, provides each student with a myriad of professional and career insights. Any beginning wildlife professional would benefit from a face-to-face sequestered personal interview with a top wildlife professional, and the meetings are an important added value. Following the hunt, students and guides reconvene at the duck club for lunch on Sunday morning. A key post-hunt requirement is that students are required to submit a written short essay on their post-hunt reflection, which provides important feedback on what students glean from the experience. The essay also provides an opportunity to convey a small measure of gratitude to the owners and major supporters of the event, and with the guides and staff who have volunteered their time on a premium duck hunting weekend to help mentor the next generation of wildlife professionals.

**Figure 2.** Student from the University of California – Davis learn shooting skills from an experienced wildlife professional at Bird Haven Ranch, California, USA. Photo by Wayne Tilcock.

## LSU

The hunting experience program at LSU has organically adjusted over time in how it serves undergraduate students. Beginning in 2008, hunter safety education became a required component of the senior-level wildlife management techniques course, taught in-house by a faculty member and a Louisiana Department of Wildlife and Fisheries waterfowl biologist. Any undergraduate student that then purchased a hunting license would be provided the opportunity to hunt waterfowl. Student hunts the first 2 years took place on the Sherburne Wildlife Management Area, Louisiana, but success was low (only 2–3 ducks harvested). In 2010, hunts were moved to the Atchafalaya Wildlife Management Area, Louisiana, which is probably one of the most challenging areas to access in the lower 48 states; this was not ideal for new hunters. Then, in 2011, LSU partnered with a private duck club in south Louisiana, which agreed to provide land access, housing, guides, and lodging for an early blue-winged teal (*Spatula discors*) season hunt for 12 undergraduates every fall.

Newly arriving faculty in the School of Renewable Natural Resources at LSU then secured additional opportunities with private duck clubs, bringing the number of student waterfowl hunting slots to 34/year by 2017. During the same period, connections to private deer clubs also provided students interested in white-tailed deer (*Odocoileus virginianus*) hunting to have that opportunity each year (15–20 hunting slots/year).

Currently, hunting opportunities are made available to all students enrolled in the senior-level wildlife management techniques course, and some undergraduates and graduate students in other senior-level wildlife courses. Hunter education is conducted by faculty in-house (although it is no longer a requirement for the wildlife management techniques course) and sporting clays practice takes places in conjunction with the Louisiana Department of Wildlife and Fisheries Hunter Education Program and Delta Waterfowl Foundation. Firearms and ammunition for the hunt are provided by the faculty at LSU, and transportation and insurance is provided by the School of Renewable Natural Resources at LSU because the program is considered part of the wildlife management techniques course. As the program expanded to incorporate new locations for students to experience hunting, all of the private hunting clubs have willingly provided housing, guides, and lodging at no charge for students and chaperones. From an implementation standpoint, although there is some local variation, the typical program includes students arriving the early afternoon and spending the afternoon practicing gun safety and shooting on a clay target range, with instruction provided by faculty chaperones. Students typically hunt waterfowl the next morning in pairs, and instruction is provided by guides from the hunting clubs, whereas deer hunting occurs over an entire weekend and individual students typically hunt with

1 guide. Harvested waterfowl and white-tailed deer are used the following week in class for scientific dissections and discussion, with the meat becoming communal that students share at an end-of-year cookout. In both programs, all hunting activities took place according to state and federal regulations with appropriate licensing for all participants.

**Common Challenges and Opportunities**

*Timidity around firearms.*—Through our own experiences at both LSU and UC Davis, we have found that the Millennial (born 1981–1999) and Generation Z (born mid-1990s–early 2000s) students passing through our programs are commonly hesitant to handle or even be near firearms. Although previous generations of wildlife professionals mostly grew up with a knowledge of firearms, in our experience, the majority of current wildlife students have little or no familiarity with guns. Today's students often stereotype firearms as stylized weapons used strictly to kill other humans. The unfortunate modern reality is that gun violence is a more common phrase in American society than shooting sports. Accordingly, overcoming trepidation about firearms is a barrier that collegiate hunting programs must overcome, and a goal of our new hunter programs is to help students understand the practical use of firearms and become comfortable with how to use them safely.

In our experience, it takes multiple, independent periods of handling guns, plus several boxes of shells on the range, for many students to feel confident in basic firearm handling. The result, however, is a cadre of students with a newfound understanding of firearms, and the self-confidence to handle guns and enjoy shooting. It is remarkably empowering for the students, and we have found that their fears and misgivings about firearms are based simply on lack of exposure and experience. Once those barriers are removed, the respect and appreciation for shooting skills is immediate and often impressive.

*Timidity to harvest.*—Even students who become adept and enthusiastic sporting clay shooters can feel conflicted about harvesting an animal in the field. Our students tend to hold a mutualistic ideology (Manfredo et al. 2009) towards wildlife, with a deep concern for their ethical treatment, which stands in contrast to the domination ideology more closely associated with traditional views on wildlife (Manfredo et al. 2009). Personal affection for individual animals makes it especially difficult for them to pull the trigger, and indeed, it is not uncommon for students to show significant emotions ranging from joy to tears after harvesting their first duck or deer. We believe that this emotional response underscores the transformative nature of hunting; how often as an adult does one have such an intense emotional experience? Harvesting wildlife is no longer a hypothetical scenario open to armchair condemnation or condonement; it is a personal choice, which when made, fundamentally establishes a new understanding between the student and the resource. At UC Davis, we refer to this as our contract with the marsh; we take from the marsh with gratitude, and so we must give back with generosity. It has been remarkable how quickly and how strong that bond is fused for the students through this first-time hunting activity.

*Social media.*—Many readers of this article can relate to the frustration of watching someone scroll social media on their cell phones instead of enjoying the activities in front of them. This can feel especially egregious and contrary to the traditional hunting culture, where the duck blind or tree stand is often a place for quiet reflection, immersion in the outdoors, escape from technology, and comradery with fellow hunters. The initial reaction from many who were raised in a traditional outdoor culture is to upbraid the technophile and unceremoniously tell them to put their phones away. But is it so harmful that our students want to share photos of sunrise on the marsh with Instagram followers? To share video of a dog retrieving their blind-mate's first duck with Facebook friends? For the 40–80 students who go through the college hunting programs at our respective universities, their experience is personally shared with thousands of additional students, friends, parents, and family members with universally positive branding. Thus, as part of the engagement in the UC Davis and LSU hunting programs, our students, during and after the hunt (and perhaps for life), have become ambassadors to the larger community, and appropriate use of social media should be encouraged to expand that sphere of influence exponentially.

*Support via private partnerships.*—Foundational to both hunting programs is the outpouring of support we have received from agencies and our local hunting community. Effectively, neither of these original college hunting programs would be possible or successful without the generous support of private landowners, local hunters, and hunting clubs, who give of their time, facilities, and personnel during the prime of duck or deer season. Development of partnerships for the engagement of new hunters, especially those intending to pursue a career in wildlife management, represents an important new level of private engagement into undergraduate wildlife education. Critically, students see firsthand the enormous amount of time and resources that hunters invest in habitat management on private land, the net ecological benefits of which vastly outweigh the number of animals that hunters actually harvest. Furthermore, it is our universal experience that students, landowners, and mentors benefit from the cooperative interactions and come away from the experience enriched by giving back to the next generation, and with more hope for the future stewardship of the wildlife resource than when the weekend began.

Additionally, we note that the importance of private partnerships does not extend strictly to land access and guide services. Hunting activities, especially for waterfowl and white-tailed deer are, field-gear intensive. Outfitting $\geq$50 new hunters each year with firearms, ammunition, and appropriate camouflage clothing (e.g., hats, shirts, jackets, gloves) requires significant financial resources. For example, last year the LSU program used 27 cases of steel shot for skeet shooting practice and hunting activities. In California, CWA covers those costs every year and provides students

with camouflage gear and waders. Originally, the faculty at LSU bore the cost of outfitting the students; however, as the program at LSU has grown in size, we have initiated and fostered relationships with non-governmental organizations, outdoor clothing manufacturers, and firearm and ammunition distributors, who generously donate the resources our expanding program requires. Student-hunter camps and equipment sponsorship represent new ways that universities, private landowners, and industry can proactively and directly have a hand in undergraduate education, and we call for increased engagement from the private sector to help wildlife students get the practical experience needed to be effective wildlife professionals.

## College Hunting Experience Programs as a Mechanism for Hunter Recruitment

College students are ideal but regularly overlooked candidates for new hunter recruitment (Stayton 2017). College is a period of self-exploration, and many students actively seek out adventurous activities (Fig. 3) different from their upbringing and former cultural environment (Ravert 2009), in which they continue to participate after graduation (Luyckx et al. 2006). Additionally, hunting has the potential to integrate with Millennial and Generation Z values regarding sustainability, and locally and ethically sourced protein (Tidball et al. 2013). Recruitment programs are best targeted at adults that have the means (financial and otherwise) to take up hunting as recreation, as opposed to the historical approach of taking a kid to hunt, which although enjoyable, provides less long-term return on investment (Price Tack et al. 2018). College-aged adults in particular are forming new peer groups, and forging social and professional connections with others in the hunting community is an important part of retaining new recruits (Stayton 2017). Some new student hunters we have trained at LSU have developed newfound and richer relationships with family members who hunt; often, these are young women who now share mornings in the duck blind with a father, uncle, or grandfather who had never taken them hunting before. Certainly, at LSU many graduates have continued hunting when they have the capacity to do so, and have integrated others from their peer-group into their newfound sport.

**Figure 3.** Students from Louisiana State University watch the skies for ducks at Pine Island Lodge, Louisiana, USA. Both students in this photo were first-time hunters and have continued to pursue waterfowl hunting on their own post-graduation. Photo by Kevin Ringelman.

Nevertheless, one challenge that we have discovered is that, once introduced to the sport, many of our students are excited and motivated to continue, yet the large-scale commitment of resources (e.g., guns, waders, other gear that was provided for them at the camps) becomes a formidable barrier. Moreover, with only a weekend of experience under their belt, they are not yet in a position to find areas to hunt or do so without continued guidance or mentoring. The next phase of our efforts at LSU will be to focus on connecting these new recruits (perhaps through social media) with senior mentors or more experienced fellow students who can continue to help the student grow in the sport. There is also a need to track students after graduation to determine how many actually are recruited to become regular hunters, and social media platforms for alumni may provide a useful mechanism for follow-up.

## Parallel Endeavors and Future Directions

We estimate there are >450 recruitment, retention, and reactivation (R3) programs across the United States for youth and adults that target a diversity of interest groups (Stayton 2017), and our goal is certainly not to review them all here. Many of these programs are available to college-age adults, but until very recently, the programs developed for UC Davis and LSU were 2 of the few that directly interfaced with university wildlife programs. Programs such as Conservation Leaders for Tomorrow offer retreat programs for non-hunting students and early-career professionals wherein they learn the value of hunters to the wildlife management enterprise, hunting ethics, firearms handling, and shooting skills (http://clft.org). These parallel efforts are especially valuable in reaching students outside of university wildlife programs who may still seek a career in wildlife management, or early career professionals in our field that have not had the opportunity to experience hunting. Within the last couple of years, college hunter programs have emerged at several universities, and similar to the UC Davis model, they are not university-sponsored programs. Delta Waterfowl Foundation recently hired a national coordinator for college hunting programs, and rapidly expanded college hunting with 24 schools hosting some type of program in 2019. Delta is expecting rapid expansion of the program where they offer some funding and liability insurance, and the local Delta chapters help with access, mentoring, and other logistics.

We foresee models similar to this as the most productive path forward because it avoids the restrictive firearms policies and liability concerns shared by many universities across the nation. We note that much of the success of LSU's program has been because of strong and continued support from the administration in the LSU Agricultural Center and from the Director of the School of Renewable Natural Resources. Regardless of which model is employed, we see significant room for expansion of hunting programs to college wildlife departments across the United States. It is

**Figure 4.** First-time hunters and a faculty mentor from Louisiana State University at Pinola Hunting Club, Louisiana, USA. The students are now pursuing graduate degrees in wildlife and wildlife habitat management. Photo courtesy of Louisiana State University.

our hope that agencies, non-governmental organizations, and private individuals will recognize the value of collegiate hunting programs in rounding out the educational experience for wildlife undergraduates (Fig. 4), and can leverage their connections to facilitate additional opportunities.

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