HUNTING ETHICS, SELF-LIMITATION, AND THE
ROLE OF SUCCINYLCHOLINE CHLORIDE
IN BOWHUNTING

The evolution of hunting has been marked by many technological advances; concomitant changes in the competency and ethical behavior of modern hunters have not been as apparent. In view of the recent Wildlife Society Bulletin paper on the use of succinylcholine chloride-treated arrows for deer hunting (Causey et al. 1978), we would like to address the implications of this technological advance on both philosophical and technical grounds.

Although we strongly believe that the incidence of wounded deer should be decreased, we cannot subscribe to the use of drug-treated arrows to accomplish this goal for the reasons stated below. First, the concept of bowhunting as a primitive sport placed emphasis on hunting skills rather than equipment sophistication. Subsistence hunters have long used drugged arrows in the pursuit of game (Oswalt 1973), but in most instances that we are aware of, such tactics were necessary because of equipment limitations, i.e., bows were of inadequate power to inflict mortal wounds consistently or arrowheads were relatively inefficient. Adding drugs to modern archery tackle eliminates much of the primitive aspect of the sport—the aspect giving bowhunting its greatest appeal to many archers. A large number of technological changes have also occurred in archery equipment (e.g., compound bows, sights, release aids). Although these changes could be considered gadgets they have one basic difference to succinylcholine chloride, that is, the method of kill is different. All these archery tackle additions have in common the intention of increasing accurate arrow placement; succinylcholine chloride only necessitates that an arrow penetrate the deer (the animal is killed by the drug, not necessarily by the broadhead).

Second, the potential danger of increasing the incidence of fatal human accidents from drugged arrows must be considered carefully. Accidents involving self-inflicted wounds (wounds of the type described by Causey et al. 1978 as being effective to release the drug) by hunters or unattended children would almost certainly be fatal. Additionally, once the entire animal becomes a vital area, shot selection and good arrow placement are less important. Under these conditions we feel there will be a tendency for less cautious target identification, thus increasing the potential for human error and accidents.

Causey et al. (1978) suggested that the number of deer struck by arrows would not change as a result of hunters using drug-treated arrows. This is difficult for us to perceive. If hunters use an arrow that only requires a penetrating hit on the animal, the entire animal becomes an acceptable target, increasing the number of potential shots. As Causey et al. (1978) point out, crippling rate (more accurately, wounding rate) and crippling loss are not equivalent, but with drug-treated arrows more wounded deer would die. The number of deer recovered would increase, but perhaps not as dramatically as suggested because the hunter must still have the basic skills to track a wounded animal.

Modern hunting implements have undergone consistent technological advances through time. Longbows were replaced by recurve bows, which now are being replaced by compound bows. Similar advances have been made in arrows and in broadhead design and materials. The drug-treated arrows described by Causey et al. (1978) represent still another technological advance. Hunters, in contrast, generally have not been required to evolve either ethically or technically in the pursuit of sport hunting. Hunter training programs are
limited and designed to assure minimal knowledge. The influence of these programs on attitudes and field behavior has only been demonstrated in reduced accident rates. We know of no state that requires either a demonstrated knowledge of firearm or bow handling and a demonstrated minimum level of expertise in using them. (Archers may be required to demonstrate minimum shooting competency as a prerequisite to hunting on some federal or state wildlife management areas.)

Thus, we can see that while modern hunting has advanced in equipment technology, much less progress has been made to increase hunter expertise and knowledge of hunting equipment and wildlife management. Advances in the effectiveness and ease of using hunting equipment have surpassed advances in hunter training and preparation, i.e., development of an enlightened and competent hunter still requires experience and time. Modern hunter training courses may accelerate that development, but they do not replace experience.

As Leopold (1943) warned and Kozicky (1977) reemphasized, the modern hunter is quickly becoming a gadgeteer. Some sportsmen have refused to become a part of this gadget-oriented hunting trend; they choose to use muzzle-loading firearms and archery equipment (although there certainly are gadgeteer archers). Their attempt at self-limitation is evidence of their efforts to increase the sport in sportsmanship. Wildlife managers should be encouraged by, and should encourage this attitude. The use of drug-treated arrows would likely encourage less competent archers to go afield unless more stringent requirements were set to qualify for an archery license.

To illustrate the basis for our concern, let us cite an example. In New York State all bowhunters are required to take a 6-hour short course in bowhunting and archery safety in order to buy an archery big game license. In our experience as students and instructors in the short course, we have observed only a small percentage (~15%) of archers who have passed the shooting exercise. Passing this exercise (3 of 5 arrows in the kill area of a deer target at 10–25 yards) is not required to complete the course. The course encourages self-evaluation and restricting oneself to shots at vital areas within one's accuracy limitations. Availability of drug-treated arrows minimizes the need for such evaluation and limitation.

If we are to overcome the mounting anti-hunting sentiment in the U.S., we must consider the sources of this discontent (Prodelius 1973, Shaw and Gilbert 1974, Shaw 1977). A major concern of nonhunters, one that provokes them to extremist positions, is their image of hunter behavior and competency (Kohlfing 1978). Upgrading the hunting skills and knowledge levels of hunters as well as requiring some minimal level of shooting competency is one way of improving the hunter's image and instilling in nonhunters a confidence of hunter competence. Conversely, the use of drugged arrows could easily be construed as an unfair gimmick giving hunters an advantage over their quarry, or as an admission of the inadequacy of modern bowhunting equipment or its users, thus having the opposite effect of that hypothesized by Causey et al. (1978) through reduction of crippling loss. Any reduction in archer skill through widespread use of drugged arrows would run contrary to ethical standards (attempting to inflict a quickly fatal wound). Acceptance of reduced skill seems to show reduced respect for the quarry.

The temptation is strong for hunters to substitute technology for personal competence, yet with improved education this trend could be discouraged. Considerable disenchantment concerning hunter behavior currently exists, even among hunters. If wildlife professionals support efforts to improve hunter behavior and knowledge, we may reach a point where hunter competence cannot be effectively challenged. As hunters develop more appreciation of the hunting privilege and become more aware of wildlife management goals, it seems to follow that the ethical pursuit of game would also accrue, making wildlife management much easier by working with an enlightened public.
LITERATURE CITED


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