<u>Op/Ed</u>



## Growing concern

For several decades animal dissections has been a routine part of the biological sciences curriculum high schools and colleges. Many students have forced themselves to participate in dissection assignments, overriding their good instincts, because they thought they had no choice. They do! Here is my story about confronting the dissection status quo during the course of my studies leading to a doctoral degree in animal behavior.

In high school biology class, I didn't look forward to the mandatory dissection assignment. I choose the fetal pig over the cat, because it was easier for me to distance myself from an animal that I didn't share my home with. The dissection took up several weeks of class time, and I eventually got used to the pungent small of the formaldehyde and the greasy feel of fleshy bits that clogged the sink drain by the end of class. I also got over my initial reluctant to cut into the flesh of a once-living animal. By the time I reached my sophomore year as a college biology student, I had participated in classroom dissections of rhesus monkeys, frogs, dogfish, sharks,

pigeons, mudpuppies, crayfish, and several other invertebrates.

But I never got over the nagging feeling that dissection wasn't the right thing to do. Surprisingly, it was the "lowly" insects that first inspired me to act on the feeling. I was among a small group of students who, during genetics labs, would secretly allow fruit flies to rouse from their ether-induced stupors and fly away, rather than dumping them into a dish of oil called the fly morgue. Emboldened by my success as a subversive fly rescuer, I approached the professor of my entomology course to express my objection to killing adult locusts for a lab exercise by snipping off their heads with scissors. He allowed me to knock them out with ether first.

By the time I was a graduate student in animal behavior, I had become convinced that classroom dissections and vivisections did more harm than good. As a lab instructor for an introductory biology course, I campaigned successfully for providing students the option of not having to purchase and dissect a fetal pig. Nine of the forty students in my two lab sections chose to learn with humane alternatives that year, and they performed better than most of the others on the final lab exam.

Why object to dissection? First, there is the animal suffering involved. Investigators of the dissection trade have documented cats being drowned in burlap sacks or prodded roughly into crowded gas chambers, rats embalmed with formaldehyde while still living, dozens of live frogs piled into sacks for days or weeks without food, and sickly turtles kept in filthy, overcrowded holding tanks. These sort of cruelties are commonplace and, though inexcusable, perhaps not surprising in a business where the "merchandise" is going to end up dead anyway.

Then there are social concerns. A principal goal of life science education is to teach respect for life. Dissection doesn't teach respect; it undermines it by devaluing the lives of other creatures to the level of expendable objects. Unfortunately, many bright, compassionate students respond to this by turning away from careers in such fields as medicine, veterinary medicine, or nursing, where such qualities are most needed. less sensitive students may be hardened by the exercise, the consequences of which are open to speculation.

There is also quality of education to be considered. Teachers who continue to use live animals in dissections or other invasive classroom exercises are apparently unaware of or unmoved by the fact that more than a dozen studies have been published showing that students using humane alternatives learn anatomy and physiology as well as or better than students who use animals. Abundant resources are available for learning anatomy, physiology, genetics, toxicology, and other animal-related fields that do not require animals to suffer and/or die. These include films, computer simulations, models, books, or a trip to the local veterinary clinic.

Finally, there is environmental protection. Many of the animals harmed or killed for classroom use are caught in the wild. Populations of frogs and sharks, for instance, have been seriously declining in recent years, and while the specific impact of their capture for classroom use is not know, it is certainly not ecologically beneficial. Moreover, the world needs people who value environmental stewardship and compassion for life. Dissection fosters neither.

So think twice about participating in classroom exercises that are harmful to animals. If you think, as I do, that it isn't good education, then speak up. Otherwise, your teachers will continue to think everything is A-okay with their choice of teaching methods, and little will change. By exercising your right to learn biology without harming animals, you send a strong message that you care about animals and the environment, that you car about society's values, and that you take your education seriously.

> Dr. Jonathan Balcombe Assistant Director for Education with The Humane Society of the US



