



# So, You Want to Be a Graduate Student?

## COMMITMENT, RIGOR, AND A TOUCH OF MACGYVER

By Blake Grisham, Wesley Anderson, Laura Navarrette, A.H.M. Ali Reza, Ph.D., Ben Skipper, and Bradley Strobel

**B**lake Grisham crawled from under the Texas Tech field house—his home for three months each year while he does fieldwork. He was soaked, tired, and covered in what appeared to be bits of rat carcass. His undergraduate technicians looked at him expectantly. “Is the water fixed?” one of them courageously asked. “Maybe,” Blake replied, doubtful after yet another attempt to get water to the dilapidated structure. Towns are few and far between on the Texas Southern High Plains, and all the plumbers he called refused to drive an hour and a half each way for the job. The same two thoughts he’d had for the past six years echoed through his head: “What did I get myself into?” and “Man, I love this job.”

Welcome to the often unpredictable life of a graduate student.

Many undergraduates in wildlife science or natural resource management assume that graduate school is the next logical step. But some undergrads may find themselves unprepared for the rigors of a graduate program. As graduate or post-graduate students with a combined 25 years’ experience in graduate school, we’ve learned a lot about what it takes to succeed in master’s or doctoral programs. In what follows, we attempt to shed some light on what graduate school is *really* like—an exposé that we hope will help current undergrads reach their career goals and know what to expect if they choose the grad school path.

We cannot stress enough that graduate school is *not* for everyone. Dedicated individuals can positively impact the wildlife field without an advanced degree by doing any of a variety of fulfilling and important jobs, from being a wildlife biologist for a consulting firm to serving as a wildlife law enforcement officer.

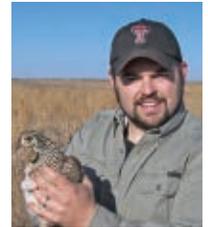
If you think graduate school is the path for you, conduct an honest self-evaluation. Ask yourself, “Why am I in the wildlife field?” You may respond with something like, “I like to be outside,” “I like to hunt and fish,” or “I love animals.” These passions may have gotten you through some or all of college,

but now it’s time for a reality check: Many wildlife biologists spend more time at the computer than in the field. Direct contact with wildlife is often rare, and hunting and fishing while on the job is frowned upon. To succeed in graduate school and in the “real world” beyond, you’ll need a deep curiosity about the natural world, a desire to find solutions through intense and persistent study, and a solid commitment to the profession.

### The Tools You Will Need

Let’s say you’re serious about continuing your education. Perhaps the most daunting aspect of preparing for graduate school is getting in. In our view, there are three key elements to being a successful applicant:

**A strong academic record.** The saying “D’s get degrees” does not apply in graduate school. Most universities and some funding agencies have minimum criteria for graduate students, including a competitive grade point average and Graduate Record Exam scores. Foreign students may need to take a test such as the Test of English



Credit: Clint Boal

*Blake Grisham is a doctoral student in the Department of Natural Resources Management at Texas Tech University.*



Credit: Lucas Schilder

After rising early at the Texas Tech field house, master’s student Phil Borsdorf dons his “snake boots” to prepare for a day of radio tracking lesser prairie chickens. Living for weeks in less-than-luxury accommodations is part of life for many graduate students.



as a Foreign Language or the International English Language System.

**Active participation in a wildlife club.** Participating in the student chapter of The Wildlife Society, the Society of Conservation Biology, or similar clubs at your university connects you with undergraduates, graduate students, and faculty members who share your interests. Serving as an officer could also give you an edge on your graduate school application. Graduate advisors often look favorably upon applicants with evidence of leadership experience, since graduate students are expected to lead their own research project.

**Field experience.** Fieldwork should not be considered optional for undergraduates in wildlife science. Many universities require field classes or research internships as part of the curriculum, but more experience is always better. Check with your school's faculty and graduate students or online resources, like The Wildlife Society's [Career Center](#),

to see if any summer field technician positions are available. Faculty and graduate students often need volunteers to help with short-term field work or data entry. Such work won't fill your pocketbook, but it will stand out on your résumé and help build your professional network, which can lead to a valuable graduate assistantship and better jobs in the future. For example, when Ben Skipper was an undergrad, he volunteered to help a doctoral student complete tedious, time-consuming tasks, such as staining microscope slides and examining blood smears for parasites. That same graduate student recommended Ben for his first paid field position, which eventually grew into his master's degree project.

### The Right Fit

All that experience should net you a pile of acceptance letters. Congratulations! Now you have to find a program that matches your professional aspirations. In the wildlife field, graduate degrees are usually research based. The topics, duration, and rigor of the research vary widely but generally fall into one of two categories. Descriptive studies often require you to dedicate long hours in the field or lab to monitor nests or radio-tagged animals, for instance. Experimental studies tend to be more rigorous and longer in duration because they require in-depth pre-fieldwork research and careful experimental design. Due to the long-term time commitment, experimental studies are usually conducted at the Ph.D. level.

Different degrees (e.g., Master of Science, Doctor of Philosophy) offer unique challenges and opportunities. For example, although most master's degrees in wildlife require a written thesis, some do not. Students interested in a research career or hoping to enter a Ph.D. program would be wise to pursue a thesis-based master's degree, while those more interested in on-the-ground management may benefit from a non-thesis program (see article on page 72).

### What to Expect

Are you picturing nonstop intellectual discussions, tons of time in the field working with your study species, collegial debates with your advisor over coffee, or maybe getting a few papers published in short order? Some of that may be in store, but it's smart to approach school with a realistic mindset.

**Commitment.** A master's degree typically takes two to three years to complete, while a doctoral degree takes from three to six years or more. In some cases, salaries do not increase substantially among

A revealing look at Texas Tech doctoral candidate Ben Skipper's desk shows that coffee cups and reminder notes help fuel graduate work. Though many students choose wildlife studies hoping to spend time outdoors, pursuing a graduate degree virtually guarantees long hours in front of a computer.



Credit: Blake Grisham

#### Coauthor Affiliations

Wesley Anderson is a Master of Science student in the Department of Natural Resources Management at Texas Tech University.

Laura Navarrete is a Master of Science student in the Department of Natural Resources Management at Texas Tech University.

A.H.M. Ali Reza, Ph.D., is a Postdoctoral Research Associate in the Department of Natural Resources Management at Texas Tech University.

Ben Skipper is a doctoral student in the Department of Natural Resources Management at Texas Tech University.

Bradley Strobel is a doctoral candidate in the Department of Natural Resources Management at Texas Tech University.



degree types. For instance, according to [www.payscale.com](http://www.payscale.com), a state wildlife biologist with a Ph.D. will earn roughly 17 percent more than one with a B.S., or 10 percent more than someone with an M.S. Scholarships and teaching or research assistantships may cover or offset the costs of pursuing these degrees, but when your friends are out earning a real paycheck, such stipends may look puny. Also, during academic semesters, students can expect to invest 60 or more hours a week on coursework, teaching, and compiling, entering, and analyzing data. During semesters devoted to research, students can often expect to work 80 or more hours a week. You'll need a strong work ethic and considerable self-discipline to make it through these tough periods.

**Advisor.** While you may be quick to resent your advisor for critiquing your proposal or suggesting that you take an additional class, realize that your advisor is your main source of help during your graduate career. Your advisor survived the rigors of graduate school and understands the challenges. Don't be afraid to approach your advisor with any struggles you face during your graduate degree. Advisors care about your well-being and success.

**Classes.** Wildlife science classes are rigorous at both the undergraduate and graduate level, but differ philosophically. While many undergraduate courses are structured to cover all the basics, graduate courses typically presuppose a solid foundation and focus on teaching you to defensibly use your knowledge. Some graduate courses require students to teach sections of the class. Grad students also have greater flexibility in choosing their courses.

**Teaching.** Teaching assistantships are common, but the amount of time required to prepare for class and grade assignments and exams can vary greatly. Whether your teaching post requires two or 20 hours a week of prep, this responsibility should be approached maturely and professionally. We encourage you to not view teaching as a burden, but rather as a privilege—indeed, you will be educating the next cohort of wildlife professionals, and that is no small contribution.

**Relationships.** You may feel that you've moved a step up the totem pole as a graduate student, but you'll still need to keep your ego in check and avoid burning bridges. Focus on networking with other graduate students, faculty, and professionals both inside and outside your institution. You never know when a contact will help you overcome an impasse in

your research, offer guidance on completing your dissertation, or provide a positive job recommendation.

**Flexibility.** Graduate school can sometimes require a MacGyver-esque set of abilities. You may excel in the classroom, but what will you do when your all-terrain vehicle breaks down in July in a desert? On the flip side, an ability to fix a diesel motor with nothing but duct tape and barbed wire is impressive but will prove useless on an experimental design test. A combination of common sense and book-smarts is a necessity.

**Professionalism.** Whether on Facebook or at a national conference, make sure your conduct is respectful of others. We strongly advise you against posting any statements or pictures that may be considered inappropriate on social media websites. Many advisors and employers actively search these sites for red flags about their advisees or potential hires. Remember, as a graduate student, you represent not only yourself, but also your research project, graduate advisor, department, and institution.

**Attitude.** Personalities differ among graduate students, but attitudes are remarkably similar among those who are successful. They understand that there is a time for seriousness and a time for fun, and keeping the proper balance is important to both success and sanity. Doubtless, every former graduate student can recall periods of stress, exhaustion, exasperation, and failure during their research. Knowing that some things will go horribly wrong but having the ability to accept, overcome, and even laugh at these obstacles is instrumental for graduate students—like Blake, who finally fixed the water the day after he had felt so defeated. The project money he saved by doing the work himself was used to purchase radio transmitters and trapping supplies for his research. Remember, a little bit of MacGyver can go a long way.

At the end of your career as a graduate student, you will hopefully feel confident and prepared to tackle a challenging career in wildlife research or management. We wish you the best and hope our words of advice help you get there. ■



To learn more about different career types in the wildlife field and see a chart with salary ranges based on level of education attained, see this article online at [www.wildlife.org](http://www.wildlife.org).