

So You Want to Become a Herpetologist?

One very commonly asked question posed to a variety of informational sources or in person is that of becoming a herpetologist. There is very little doubt that reptiles and amphibians, also collectively known as “herptiles” or “herps” for short, have gained an increased amount of interest and admiration amongst the public. But how does one pursue a professional career or job opportunity involving these animals? Where and how does one look to begin this career path? What contacts and professional affiliations have to be established and maintained in order to do so? And what fields of study and opportunities exist within the field of herpetology, and what are each of their roles? These are all questions that must be thoroughly researched and studied if one is interested in this field to ensure the most suitable opportunity meeting one’s needs, desires, and expectations are met.

What is Herpetology, Field Herping, and Herpetoculture?

To start, what is “herpetology” and what does it mean? Which animals does it entail the study of? As it turns out, herpetology is the scientific discipline relating to any and all aspects of professional study of reptiles and amphibians. The oldest and broadest etymology of the word “herptile” can be traced back to meaning “every creeping thing”, which very early on, and even in some cases to this day, can also include the study of insects, arachnids, and other invertebrates, although in most modern contexts, are their own branch of study known as “entomology”. Both of these specific field of study are sub-fields of zoology, which entails the general study of all animals in the kingdom Animalia, which is in turn, a subset of the even broader field of science widely known as biology, or the study of all organisms and life, or living things and their processes.

Herpetoculture, on the other hand, entails the captive care, management, and breeding or propagation of reptiles and amphibians in captivity within the public or private sectors. These individuals may be amateur or professional pet owners, hobbyists, enthusiasts, breeders, and/or online or brick and mortar pet stores where these animals and their ancillary care supplies and information, and other related services are provided. Field herping, in addition, entails individuals who may casually find, observe, and/or photograph these animals in the field, or in the wild in which they are indigenous to.

So where do the differences between herpetology, herpetoculture, and field herping lay, and how, or when can one call themselves say, a “herpetologist”? This is a widely discussed, and even somewhat debated topic, and there is undoubtedly oftentimes overlap in that many professional herpetologists do also maintain or breed these animals in captivity, or engage in field herping as well in their spare time, or at the very least, may oftentimes have been inspired early on by these interests and past-times, which served as the catalysts for decisions to pursue their professional careers further. One possible answer to these complex questions may be whenever one is able to contribute to our overall scientific understanding and knowledge of these animals and their biology and natural history in some meaningful, novel, or original way, has further or more formalized training and education, and of course maintains the expectation of receiving payment or other compensation from it as a professional job or career. None of this is, of course to say that those who may be field herpers and/or herpetoculturists

can never call themselves “herpetologists” or be able to ever make these meaningful contributions to the field, and certainly, many findings do originate from these advancements and developments that these private sectors have made as a collective body as a whole. Therefore, the differences in definition of what a “herpetologist” may truly be could just be largely matter of semantics that depend contextually, and serve as a result of the rapidly changing levels of interest and accessibility herptiles have in particular towards much more of the public, as most tend to be less mobile and slower moving as a whole than other groups of animals (i.e. most cannot fly or run relatively quickly away to where they become inaccessible, etc.), and can be more easily captured, viewed, and/or kept in captivity as a result. It is also why such fields as citizen science have continued to act as emerging trends to involve many people and communities in education, conservation, and natural history than traditionally or historically.

Where do Herpetologists Work?

Traditionally, career and job opportunities within the field of herpetology typically falls within four, most common, yet differing areas. Colleges, universities, and other institutions of higher education providing public and/or private teaching and/or research are perhaps one of the most widely known opportunities in herpetology. Individuals who pursue opportunities in the field under these institutions can be professors, other types of course instructors and lecturers, teaching assistants, laboratory assistants or technicians, or professional researchers who may be involved with land management, field surveying, and restoration for reptiles and amphibians in particular. A second area in which many who pursue herpetology may consider are those provided through a governmental agency or other private company or organization, and each of these individuals may be appointed to local, state, or even federal governmental agencies or companies. Furthermore, individuals in these fields can widely range from environmental assessors, research and field biologists, land and property management, and local, state, or federal environmental and natural resources law enforcement agencies such as park rangers, state departments of wildlife, fish and game, and natural resources, or similar agencies.

For those interested in more hands on opportunities with captive animals, or those animals which are otherwise in captivity, a third area often includes zoos, or zoological parks, as well as oftentimes museums, nature centers, and other areas or attractions which maintain collections of live animals for the primary purpose of educating and entertaining the public and the community regarding the animal’s natural history and conservation. Individuals in these fields may wish to consider positions in curatorial, as well as zookeeping and other technician and staff positions or opportunities these areas may have to offer. A fourth area in which many may choose to pursue careers in herpetology are those in non-profit organizations at the local, state, regional, or federal level which focus on the public education, outreach, and/or conservation of reptiles and amphibians. However, even more emerging opportunities, such as in the industrial and medical and biotechnology industries continue to arise in herpetology as new and exciting developments and changes, and new opportunities for research and study are made.

In the majority of these areas however, herpetology is seldom the sole, or primary focus, and is instead, usually a secondary niche or field of study depending upon what each individual’s interests, experiences, and levels and areas of study may be. Early on, it was oftentimes very possible for individuals to study these animals and become professional herpetologists on their own based on their own practical

knowledge, familiarity, and experiences with these animals, either in the wild or in captivity. However, in more modern and contemporary times, the methods and techniques for conducting nearly any sort of biological study or research have become more advanced and sophisticated than before, and opportunities for these careers having become much more competitive to where further education, training, and experience is required in order to become successful.

Where to Start a Path Towards Herpetology?

Depending on what one's goals may be, the field or area of study one wishes to pursue or engage in, and as the field or position's level of roles, responsibilities, and expectations, in most, if not all cases, a minimum of some form of further college or higher degree of education will be required. These forms of higher education will, in most cases be prerequisites or otherwise conditions of employment with the institution or organization, or at the very least for the position of interest. And while it may oftentimes still be possible to make meaningful contributions to herpetology without the formal education, training, or experience, this further training will be highly beneficial in ensuring that a paid career is sought.

So what sort of degree is required in order to be able to locate a professional career in herpetology? This again largely depends on the nature of the field one wishes to enter and pursue. For nearly any sort of career entailing teaching and/or research, or other highly specialized or accountable work, a minimum of a Master's, Ph.D., or Doctorate in a relevant degree. In these cases, the educational emphasis focuses less on coursework, and much more on an original thesis or dissertation research project depending on one's interests, and also usually entails coordination, collaboration, and developing positive relationships with a board or committee of advisors in some capacity or another. In most other areas in which herpetology as a career may be considered, a minimum of a Bachelor's degree in a relevant broader field, such as in science or biology, will be at least required. Unfortunately, there are no specific majors or degrees in just herpetology, but rather graduate and undergraduate coursework must be completed in courses such as organic and inorganic chemistry, biology and zoology, biochemistry, physics, earth science, captive wildlife, mathematics, ecology, genetics, physiology, and/or earth sciences. Some universities and institutions may offer specific courses in herpetology, however, which will undoubtedly be beneficial.

The Path Along the Way

No matter the area or field of interest one wishes to pursue a career in herpetology further in, oftentimes, the first step towards the right direction will be choosing and researching any prospective colleges or universities wisely. Always be sure to research each university's program emphases, offerings, and majors and courses available, and whether that school or university offers a strong background in the sciences, biology and zoology, natural resources, mathematics, or related fields. Many universities may also have faculty and staff who conduct research in, or are otherwise employed in the field of herpetology in one way or another. Further information about each prospective institution can be found by gathering information from the college's websites and other available program materials and resources. Sometimes, other resources may also be available for locating schools or universities as well, such as through local, state, or regional herpetological societies, herpetological

journals or publications, or other informational books, publications, or websites.

Once a particular school or university is chosen, it is then important to research and meet the entry requirements, and then, once accepted, the offerings and requirements for the particular major or program one is interested in pursuing. Which courses to select and the recommended or suggested course loads and other information will oftentimes be available through the university's program offerings, as well as usually through the assigning of an academic advisor. An academic advisor will typically be a university instructor or other staff or faculty member who is available to provide guidance and insight into one's college career path towards herpetology. During one's undergraduate path, it is also often a good idea to volunteer and become an active participant in any of the relevant extracurricular opportunities which may be available through the university or outside of campus as well. These may include, but are certainly not limited to serving as a volunteer or board member of any relevant student or community organizations on campus, volunteering as a research assistant for a staff or faculty member, or serving as a teaching assistant or tutor for the areas of interest in a classroom and/or laboratory setting. Some universities may also even have their own student based herpetological societies or other student organizations with specific emphases on the various areas of herpetology.

Following graduation from college with at least a Bachelors degree in the related field, those who are following a path towards herpetology may have several further options available to them at this point. Some may choose to seek employment immediately thereafter, although in at least some cases, opportunities for employment in the field may be more limited, as is advancement thereafter. However, if one's focus and goals are to have some requisite education and training in herpetology, but pursue jobs in other areas oftentimes unrelated to herpetology, a Bachelor's degree or even further education in some cases in an unrelated area may be a sufficient and suitable option, particularly for those who may feel that turning a personal interest or passion into one's regular line of work would reduce the longer term enjoy ability of that opportunity. Nonetheless, many different career opportunities are still available for those with Bachelor's degrees, which may include, but are far from limited to positions in museums and zoos, as well as research laboratories, non-faculty positions in schools and universities, certain government agencies, local, state, or national parks as naturalists or environmental educators, veterinary medicine and technicians, and even as environmental technicians through other small to large companies, albeit less directly related to herpetology.

However, if one wishes to continue to further their path of education towards a career in herpetology by pursuing a Master's, Ph.D., or Doctorates, many more opportunities then become available, oftentimes with the greater freedom or flexibility for one to choose to pursue their own interests in the field, as well as with higher pay and salaries, and greater responsibilities, and potentially more rewarding outcomes. This is especially the case if one wishes to make contributions to data collection, analysis, and publication through any rigorous scientific journals or other related scientific publications.

In other words, these scientific findings and forms of knowledge, and how to publish them, must be properly communicated to employers and others. However, the drawbacks worth mentioning in pursuing further education beyond a Bachelors would of course entail a longer, more demanding, and more difficult and rigorous road to academic achievement and workloads, but once there, many will have become much more competitive and cutting edge in the job market for positions in herpetology,

and of course oftentimes much more satisfying and rewarding. Therefore, this is why emphasis in writing, and especially technical writing are also highly beneficial areas of study in any graduate or undergraduate program or path towards herpetology.

Summary and Conclusions

To summarize, the field of herpetology is a surprisingly broad and diverse one with many different career paths and avenues available for one to take, all depending upon one's interests, skills, knowledge, and experiences, as well as desired goals and outcomes, and many more detailed and in depth articles and even books and publications on this subject can be discussed. In addition, many other supplementary and ancillary ways of better furthering one's path in this exciting and engaging field full of discovery also exist, and there is little doubt that as a collective group of animals, reptiles and amphibians are among the fastest growing and developing segments not only in terms of the increasing public interest and knowledge and developments we can learn from them and their unique lifestyles for surviving in the many ways they do, both in the wild and in captivity, but also the fact that they are among the groups of animals in greatest conservation need, and public attitudes, knowledge, and perceptions about them must also continue to shift in more positive directions with the contribution of scientific knowledge and research, public education, and outreach.

Joining or volunteering as an active member or board member of a professional herpetological society or similar organization nationally, or through any local, state, or regional herpetological societies which may exist in one's area are some of the further ways to benefit any career path in these fields. The Partners in Amphibian and Reptile Conservation (PARC) and their state or regional chapters, the Society for the Study of Amphibians and Reptiles (SSAR), the Herpetologist's League (HL), and the American Society of Ichthyologists and Herpetologists (ASIH) are some of the more professional affiliations one can join, while other local and regional societies may be more conservation, education, or hobbyist and enthusiast based, or both, depending upon the goals, purposes, and functions of each of these local organizations. Reading scientific books, journals, and publications whenever possible is also highly advised, and some of the suggested journals can include, but are not limited to ones such as the Journals of Herpetology, Herpetological Review, Copeia, Herpetologica, and even Google Scholar. And finally, one can never stop being a citizen scientist, as well as work to develop mutually reciprocating relationships no matter one's educational background or role, between professional and amateur, and public and private sectors in sharing and exchanging newfound knowledge, findings, and discoveries to reach these common goals to better understand and raise awareness, respect, and appreciation of these amazing and unique animals like none others.