

## **Faunal Identification Made Easy: a Novel Approach to an Old Problem**

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As humans impact this planet more and more, the need for effective conservation education has increased substantially. Training students in conservation biology requires a hands-on, in the field approach in which students develop projects that are applicable to specific conservation problems. Many of these projects require the ability to quickly identify local flora and fauna (e.g., trees, frogs, flowers). Unfortunately, considerable training is often required before students' identification skills can be considered reliable and time to conduct proper training often reduces time available for actual completion of the project. For most floral and faunal groups, field guides are the traditional way to identify various species. Unfortunately, for many groups, the numbers of species in field guides can be overwhelming. Additionally, dichotomous keys, the traditional method utilized for identifying species of animals and plants, usually require knowledge of characters that are difficult to ascertain correctly without extensive training.

The new generation of computers (Tablet PC's and Pocket PC's) combined with searchable database known as "Active Server Pages" (ASP), offer new opportunities for quick and rapid identification of species. For this project, we developed a method that allows identification of snakes in North Carolina that surpasses traditional identification techniques used by the layperson. The method allows identification of snakes without the need to capture venomous species (Davidson students are instructed to leave all venomous snakes alone when in the field). Although this technique has been applied to snakes, later expansion to other groups of flora and fauna can be based on the same techniques. Our snake ID system can be found at <http://www.herpsofnc.org>.

Davidson College Instructional Technology Group (ITG) provided the expertise for the ASP programming for this project and we are continuing to work with Davidson ITG to refine the program and to discover methods by which it can be applied to other groups or regions. Yurii Kornilev, a Davidson student, wrote the ASP code and has been instrumental in making this project succeed.