

GUARD HAIRS' APPLICABILITY IN CARNIVORE RELATED MONITORING PROGRAMS

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With noninvasive methods we can avoid direct contact with animals, because of this, researchers' presence will not bias the results of the survey and animals can avoid stressful situations. The use of noninvasive techniques probably dates back to the origin of humans, the knowledge on traces and scats can be considered as noninvasive methods, but we can gather useful information from mammalian hairs too. A hair can be a useful data source to gather information on certain predators' diet (ex. scat analysis, prey remains) or to receive some basic faunistical data on a given area (ex. birdnest analysis), but it can be a good tool for forensic science too. There are certain features of a hair that can be used for identification, such as length, shape, color (macroscopic), medulla pattern with and without oil preparation, and cuticula impression in gelatin (microscopic). These features were examined by a light microscope (400x magnification).

Hair samples from 11 predator species kept in safari park - occurred in Hungary were studied. Hair was collected from 4 body region individually (dorsal, lateral, abdominal, snout). Thus 44 independent, anonym samples were sent to three experts to identify the species by the hair. Four species were identified with success over 50% (Brown bear 75%, European badger 67%, Lynx 58%, Raccoon dog 58%) in total. Raccoon and grey wolf were identified in the least range (17%-17%). Regarding the different body parts, there were significant differences in identifying hair samples with success of certain species. It was easier to identify the species by dorsal cover hair (61%) than by the lateral hair (55%). The rate of success by examining hair from the abdomen and snout is only 21% and 24%. Unsuccessful identification was 9 out of 44 samples (hair from abdomen in 5 cases, hair from snout in 4 cases). Researchs was supported "Sustainable Conservation on Hungarian Natura 2000 Sites" (registration number SH/4/8) Swiss-Hungarian partnership program. Report was supported by the Ministry of Human Resources. (Research Faculty) (registration number: 7 629-24/2013/TUDPOL).