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Sneaky felids, smelly scents: a small scale survey for attracting cats

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For wildlife biologists, studying rare or elusive species has always been a challenge. Many wild felids are declining in numbers and geographic ranges worldwide (Long et al. 2008; Ripple et al. 2014). Owing to their rarity, elusive lifestyle and cunning, felids require sophisticated techniques to study (Boitani & Powell 2012), and diverse and innovative methods can be found among the various non-invasive techniques tested. Hair collection is one among many useful indirect methods.

Controlled hair-trap pilot studies in animal enclosures usually have been reported as successful (Weaver et al. 2005, Heurich et al. 2012, Portella et al. 2013). but when this monitoring technique has been tested in natural environments, results were less satisfactory (Downey 2005, Comer et al. 2011, Portella et al. 2013). Several lures and attractants have been tested over the years. Some of them, including commercial scents, worked (Ruell & Crooks 2007, Weaver et al. 2005); but others, such as cinnamon, vanilla, or bobcat (*Lynx rufus*) urine were less effective (Portella et al. 2013; Comer et al. 2011). The most-used scent lures, catnip and valerian, are also the most inconsistent attractants. In Sicily, researchers did not detect a single wildcat (*Felis sylvestris*) with valerian (Anile et al. 2012), but German studies experienced huge success using the same attractant (Steyer et al. 2013). Similarly, catnip, which was one of the first lures used to attract felids, (McDaniel et al. 2000) provided few detections (Downey 2005; García-Alaníz et al. 2010). The above contradictory results led us to conduct our own small-scale study of the effectiveness of different lures.

Material and methods

Our test started with dried catnip and one trail camera (Ltl Acorn 5210a) placed in the back garden of the Institute for Wildlife Conservation (Gödöllő, Hungary) during February, 2014. We also tested wire brush rub pads with Hagopur Fox commercial scent, salmon oil, valerian tincture, and dried catnip + liquid catnip. We placed 4 brushes in a row two meters apart and poured 4 ml of each lure on a piece of polar blanket placed behind the wire brushes. We placed a 5th wire brush with catnip 150 meters from the other four hair traps. We refreshed scent baits once each week for four weeks.

Results

The camera with dried catnip recorded one stone marten (*Martes foina*) and two domestic cats (*Felis catus*). In the first two weeks, two rubbing events by domestic cats were also observed on the hair-trap baited with valerian tincture. No other rub pads provided hits. Both of these cats rubbed the traps within one-half day after lure refreshment. For an additional two weeks, we used liquid catnip, valerian tincture and a mixture of catnip and valerian. After the 3rd



Figure 1. Stone marten (*Martesfoina*) in the garden of Institute for Wildlife Conservation where dried catnip was scattered.

and 4th scent bait refreshments, two hair samples were collected on the wire brush with valerian tincture. A single rub by a domestic cat occurred at the catnip-baited isolated brush.

We highly recommend small-scale pilot studies such as this one before expending funds and effort on large-scale projects in the wild.

We collected four hair samples using valerian tincture as a lure, while catnip collected three. Other lures did not elicit rub responses. In an earlier

literature review (Patkó et al. 2014) we concluded that some hair collecting surveys work better on some species than on others. In case of bears, for example, hair trap studies are usually a huge success (Mowat & Strobeck 2000; Triant et al. 2004), but in felids, failure can often occur. In successful studies, short sampling periods (Ruell & Crooks 2007; Schmidt & Kowalczyk 2006), with large amounts of attractant worked best (Schmidt & Kowalczyk 2006; Ausband et al. 2011). Our test suggested the same results, with all responses occurring shortly after lure refreshment. Monitoring with hair traps is a new and developing technique, and similar controlled tests of a variety of scents and refreshment periods are needed. Based on our work we recommend refreshing every 4-7 days with >4-5 ml of lure. We highly recommend small-scale pilot studies such as this one before expending funds and effort on large-scale projects in the wild.

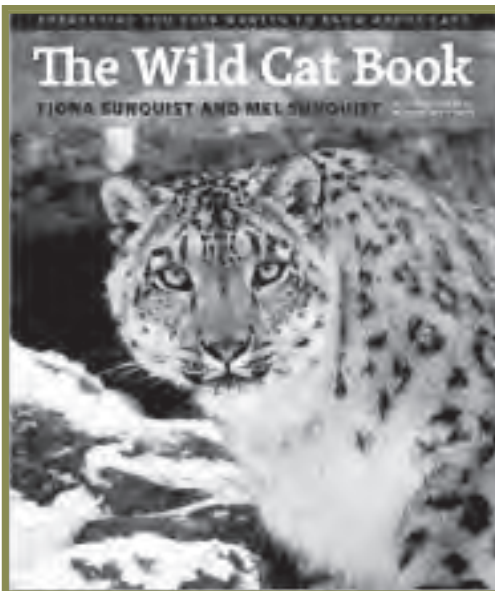
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Fiona and Mel Sunquist have just published a new book through University of Chicago Press. The Sunquists have published other books on felids, notably *Tiger Moon: Tracking the Great Cats of Nepal* and *Wild Cats of the World*. Although the book is targeted to a general audience, it provides easily accessed information and a strong bibliography for the more serious reader. Alan Rabinowitz remarks that it is “A beautifully illustrated and eminently readable book [and] is the best primer out there to delve into the evolution, survival, and status of the world’s wild cats.” Jim Sanderson comments that the book “is a pleasure to read. Enhanced with geographic distribution maps and many photographs, *The Wild Cat Book* is a comprehensive, interesting, enjoyable, and current review of all that we know about members of the great family of cats, the Felidae.”