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The Use of a Remote Cellular-Driven Digital Camera System (Smart Scouter™) for the Evaluation of OvoControl® P (Nicarbazin) Bait Acceptance in Feral Pigeons (*Columba livia*)

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ABSTRACT: Originally developed as a remote trail camera system for monitoring deer, ERS Group of Atlanta, GA has combined the advantages of digital imaging together with cellular telephone technology into a “Smart Scouter™”. By combining a motion and heat sensing digital camera, this system can record movement at the target site and upload the images immediately to both a website and email providing real time monitoring details. We describe the use of the Smart Scouter™ camera system for monitoring pigeon numbers and non-targets feeding at site where OvoControl® P bait was applied, without intervention by technicians. The camera system can augment required monitoring when applying OvoControl® P bait. It is especially useful in remote or hard-to-access areas, and can save time and labor costs.

KEY WORDS: bird control, camera, *Columba livia*, digital imaging, feral pigeon, nicarbazin, OvoControl®, pigeon, Smart Scouter™

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INTRODUCTION

Traditional remote cameras require a memory card to record images, and the user must download the images either directly at the site or at an office-based computer. By combining a motion- and heat-sensing digital camera with cellular phone technologies, the new Smart Scouter™ system can record movement at the target site and upload the images immediately to both a website and email, providing real-time monitoring of animals at a remote field location.

One of the challenges of using the newly developed bird contraceptive, OvoControl P (EPA Reg. No. 80224-1; Innolytics LLC, Rancho Santa Fe, CA), is evaluating the domestic pigeon (aka rock dove, *Columba livia*) populations at treatment sites. The bait can be dispensed with an automatic feeder, similar to a deer feeder. The unit is calibrated to dispense the designated quantity of bait each morning at a programmed time. The EPA label for OvoControl P requires weekly observations, which can be supplemented with the Smart Scouter™ camera system.

METHODS

As do many other bird species (Johnston 1995), pigeons are conditioned very quickly to the feeding routine and return to the same baiting site daily (Murton 1972). In order to collect definitive bird numbers at an OvoControl treatment site, a Smart Scouter™ digital camera system was deployed in November 2007 in San Diego, CA. In this case, baiting was tested at 6:00, 7:00, and 8:00 AM.

RESULTS

Images of the baiting process were captured by the camera, transmitted through the cellular network to the website, and simultaneously sent by email to a desktop computer, all without intervention (Figures 1 through 4).

This provided real-time monitoring of the baiting site, all without the cost of actual technicians.

DISCUSSION

Camera sensitivity and other settings can be controlled directly at the camera or via the website. The unit is powered by a 6-volt rechargeable battery, with an optional 12-volt battery backup. The unit is a compact, stand-alone system that does not require additional cellular phones or modems. The cost of camera operation at \$30/month is fully offset by savings in time, travel, and other resources.

The Smart Scouter™ camera system successfully captures and records pigeon numbers and non-targets feeding

Figure 1. Within a few days, pigeons become conditioned to the OvoControl bait and automatic feeder. Six “early birds” arrive at the crack of dawn and wait patiently for the feeder to trigger at 7:00 AM.

Figure 2. This second photo is taken 30 seconds after the feeder is activated. There are roughly 120 birds feeding. Note the absence of non-target birds in the feeding area. The camera captures the feeding operation each morning and transmits images to a website, and subsequently forwards email with picture attachments to desktop or laptop computers.

Figure 3. Approximately 60 pigeons are still present at 7:02 AM, but the bait has already been consumed.

Figure 4. Ten minutes later, at 7:13 AM, the birds have move on to other foraging opportunities. For the next hour or so, single birds will still show up from time to time and trip the camera. After that, nothing moves at the site until the next morning.

at the baiting site without intervention by technicians. The Smarter Scouter website acts as a convenient repository for photos.

The camera system augments the monitoring program for OvoControl treatment sites and is especially useful in remote or hard-to-access areas.

ACKNOWLEDGEMENTS

We express our sincere thanks to the personnel at Smart Scouter for providing the necessary technical support to complete this project. OvoControl® is a registered trademark of Innolytics LLC, Rancho Santa Fe, CA. Smart Scouter™ is a trademark of ERS Group, Atlanta, GA.

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