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Churchill Fellowship Camera Trapping Travelog

This blog is a travelogue of my Churchill Fellowship Study Tour to Europe and the USA researching remote camera trapping for wildlife research and monitoring.

Friday, 21 October 2011

Meeting with Bill Powers from Pixcontroller – Pennsylvania

After a short few hour drive but a serious number of grey hairs created by the traffic from Washington DC to Export, Pennsylvania I got to meet Bill from Pixcontroller. The most impressive initial observation is that the whole business is carried out by a team of five, so these cameras really are hand-made. In fact I watched one of their technicians constructing a new Raptor camera and every hole in the casing is surgically measured and cut. The Pixcontroller crew pride themselves on selecting the best components and they have invested a considerable amount of time and effort on buying good components for their circuitry. Pixcontroller are investing lots of time in redesigning and developing new camera traps and I was very impressed with their innovation, especially in regards to wireless technology. Not only have they mastered the technology of using the telecommunications system to transmit information gathered by camera traps, but they are also developing wireless sensors that are equivalent to a bullet cam sized component. They have also developed a circuit system that allows easy switching between wireless and normal PIR sensors which is quite advanced and very useful. In fact this was one of the requirements of the Ultimate Camera trap design !



They also have a sensor that can ignore background noise and focus on animal movement which will be a serious advantage to those of us facing constant problems from vegetation movement. The team is also playing around with cutting edge vibration sensors and pressure plate sensors to over come the challenges of camera trapping in hot and uniform background study areas. They also have a GPS feature for an additional charge- needless to say another

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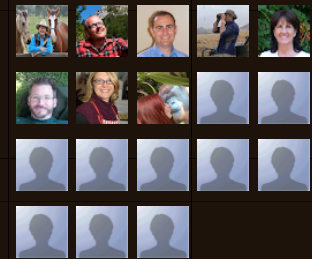
Thank you Kevin Lay and SIRTRAK NZ for the vest and possum beanie.
Thank you to Officeworks Coffs Harbour for their kind donation of a Livescribe Pen and diaries

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Ultimate Camera Trap design requirement. They are also playing around with covert cameras and live streaming camera traps (see their website <http://www.pixcontroller.com> for details).

The new Raptor camera is an infra red device and has some very nice features, they are also about to release the new white flash DigitalEye camera trap with some new features, including having components that enable wireless sensors to be used. The Raptor has some amazing programming functionality with delay programming as well as full control over what periods of time the camera can detect ie just night, just day and time periods – dare I say it yet another Ultimate Camera Trap design feature. The camera also runs off a gel cell !!!!!. Apparently TrailCamPro have recently assessed the device so check it out. The UndercoverEye has even more wireless functions.

One feature that is very exciting is the ability to fit a yagi antennae to the Raptor to allow SMS messaging as well as daisy chain functionality – nice for those of us who have cameras set in remote areas where phone communication is negligible.

Bill is a wiz technician and understands his components very well and we had an insightful discussion about the limitations of components and camera trapping. A few snippets of information that are critical to our trapping were;

1. As we suspected , but now I can confirm, PIR sensors have some major limitations especially in hot and glaring locations, so essentially using IR camera traps in deserts and dune systems where the motion sensors is swamped with light and glare and where ambient temperature and body temperature differentials are small, PIR camera traps are not a wise choice. This is why Pixcontroller is experimenting with seismic devices and pressure plates.
2. PIR sensors in camera traps are usually in one of two forms, a ceiling or dual element design. Pixcontroller use a ceiling form which minimises dead zones but most others use dual elements meaning there are breaks in the detection zone bands, therefore creating yet another gap in our detection zone understanding. This has serious implications for some survey designs and especially for camera traps being placed horizontal and facing down. For some cameras this will not be a good approach. It also confirms that facing the camera directly in the path of an animal is a bad decision.



We discussed some of the concerns that have been raised by pixcontroller users and Bill is of the opinion that they have ironed out most of them. They are well aware of the speed to first detection problem that their camera trap have because they use a Sony camera, but hope the technology behind their designs overshadow this limitation. One area where they can get challenged is in timely delivery of large orders, simply because they are a home made product and one sick person can have a big impact. But they are aware of this and try to do their best. The team are very motivated and driven towards camera trapping for research and they are keen to have a good name in the business.

Interestingly Australia is their biggest white flash camera trap market and they are not driven by the hunting market at all. Keep your eye on these guys they have some very funky equipment either out or soon to be released that will make some seriously big steps towards better camera trap designs for wildlife research.

Tomorrow I meet with Reconyx in Holmen, Wisconsin and have a long list of questions to ask them on behalf of the global wildlife survey users. Then Saturday I get to look around the cameras on sale in Cabelas, Wisconsin !!, watch out credit card.

Posted by Paul Meek at 3:26 pm



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