

Most indigenous Nicaraguan hunters in the Bosawas Biosphere Reserve rely on their hunting dogs to locate and corral potential prey animals. Relying on dogs is a little unusual in Neotropical rain forests, where firearms have supplanted traditional technologies in many regions [1]. To study interactions between the hunters and their dogs, The Observer 5.0 on a Psion Workabout handheld computer was used on expeditions into the forest. The result was a detailed dataset that far surpassed the quality of traditional paper and pencil methods.

METHODS

The flexibility of The Observer allowed for multiple behavioral classes. Activities of the focal hunters themselves received priority, but additional data were collected on habitat type (e.g. primary or secondary forest), precipitation, and the presence of dogs. It was not possible to directly observe the behaviors of the dogs as they darted through the undergrowth of the forest, but their proximity to the hunter was noted. Communications between hunters and their dogs were recorded as discrete events in a separate category, along with other noteworthy events, such as encounters with prey and attempts to kill pursued animals. As familiarity with the configuration increased, a Global Positioning System (GPS) unit was introduced into the study to track the location of the hunters, and using markers to note these points with their associated time stamps allowed for the calculation of speed on various legs of the expedition.



Photo by Michael Aitkenhead.

In all, sixty hunting expeditions were observed. As might be expected, on several occasions hunters exhibited unanticipated behaviors that did not closely correspond to categories defined in the original configuration. Given the remoteness of the field site, revising the configuration was not possible, and two strategies were used to contend with unexpected behaviors. First, some variables in the original configuration had been left unspecified,

and codes were assigned as the need developed. Second, markers were inserted in the observational data file to clarify situations that deviated somewhat from anticipated behaviors.

RESULTS

Preliminary results suggest that hunters with dogs often enjoy tremendous benefits but also incur substantial costs. Some dogs pursue animals that their owners consider inedible, and the hunters can lose valuable time chasing after a dog only to be disappointed by the result. While hunters can speculate about unseen prey based on the quality and intensity of their dogs' barking, there is considerable uncertainty in these assessments. Despite such misadventures, however, dogs typically corral enough desirable game animals to offset the wasted time. Either in combination with firearms or with simpler hand technologies, dogs allow hunters to locate a wide variety of potential prey items.

Species	% of hunt time	Number of encounters
Agouti	9.9	39
Paca	5.4	17
Nine-banded armadillo	1.5	6
Collared peccary	0.9	2
Tayra	0.3	3
Coati	0.2	3
Giant anteater	0.05	1
Northern Tamandua	0.03	1
Unidentified prey	2.95	?

Figure 1. Percentage of hunting time devoted to pursuing mammalian species by hunters with dogs in the Bosawas Reserve. n = 50 observations

CONCLUSIONS

Overall, the Workabout performed admirably throughout the study, as it emerged relatively unscathed despite the rugged conditions and occasionally torrential rains. In general, The Observer permits considerably more detail in data collection than is possible with more traditional methods. As with hunters and their dogs, the benefits of computerized data collection far outweigh the costs, and I will not hesitate to use The Observer in future research.

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REFERENCES

1. Redford, K.H. and Robinson, J.G. (1987). The game of choice: Patterns of Indian and colonist hunting in the Neotropics. *American Anthropologist*, **89**, 650-667.