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# CAN SECONDARY INFORMATION INFORM ABOUT POPULATION TRENDS OF CARNIVORES IN BORNEO?

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ABSTRACT. — Effective methods for estimating occurrence and abundance of carnivores are limited and often expensive in labour or equipment. Conducting interviews about wildlife species, including carnivores, is a common tool used in Borneo and throughout Southeast Asia to investigate species distribution and understand their conservation status. Such surveys are appealing because of perceived savings in time and equipment; however, biases in amount of available information, miscommunications about species of interest, and species misidentification can result in errors of unknown magnitude, rendering results of at least some surveys suspect. Hence, it becomes difficult to disentangle accurate from inaccurate information. Studies are needed to investigate the variation in effectiveness of interview surveys. Also better guidance is needed to clarify under which conditions secondary surveys can be used with confidence, and for which particular audience. Until the factors that bias results are identified and, where possible, accounted for, the main use of secondary surveys for carnivores and other difficult to identify or rarely encountered species will be to help develop a dialogue between people that reside or work in conservation project areas and the investigators working on such projects. Secondary surveys may also serve as a tool to help identify hypotheses to be addressed in studies with strong experimental designs.

KEY WORDS. — data accuracy, interview, local communities, species occurrence, survey

## INTRODUCTION

Many carnivores are cryptic, nocturnal, occur at low densities or inhabit dense vegetation. Therefore, surveys of their distribution and other aspects of conservation status are difficult using most of the conventional wildlife survey methods (Mathai et al., 2010). Reliable information on wildlife status helps managers make informed decisions concerning their conservation. Whether to invest scarce resources and time in surveying can be a difficult decision for managers and while it has been argued that expenditures on determining the presence of a potentially viable population is a prerequisite to management (Chadés et al., 2008), this is an extreme stance with potentially limited application. While improved understanding is useful for management, to suggest that no management should occur without having

demonstrated the presence of a potentially viable population overlooks that conservation resources are finite. There is a strong argument whether to use available resources for demanding studies to gain knowledge on threatened species or conservation implementation. This is particularly the case because: 1) assessing whether a species' population is viable/non-viable requires comparatively less resources; 2) assessing each species' status in sufficient detail to infer its level of viability in the area in question is highly demanding of resources for carnivores; 3) in Borneo there are, and will continue to be, few cases where resources are directed only to one species and other species present are not considered; and 4) many protected areas are not effectively addressing the most obvious, basic threat-related activities such as general compliance with hunting and habitat laws. Situations where individual species are already afforded much