

**BUSH PIG DENSITY, DISTRIBUTION AND CROP RAIDING TRENDS AROUND THE
NORTHERN SECTOR OF BWINDI IMPENETRABLE NATIONAL PARK, SOUTH
WESTERN UGANDA**

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Abstract

The study focused mainly on crop loss to bush pigs and local population density of bush pigs around the northern sector of Bwindi Impenetrable National Park (BINP). Systematic monitoring of crop loss to bush pigs and population density estimation was carried out in and around the northern sector of BINP for eight months (May-December 1999). The design was aimed at estimating the local bush pig population, quantifying the amount of crop loss to bush pigs, and determining the factors that influence bush pigs depredation on crops. Interviews were also carried out among the communities to gauge their perceptions of the problem of crop loss to wildlife and to bush pigs in particular.

The population density of bush pigs in the northern sector BINP was estimated using encounter rates of dung group pellets along line transects. The average occupancy distance for the bush pigs within the forest was also estimated in an attempt to determine how the bush pigs utilize space from frequencies of foot tracks along line transects from the park boundary and within different habitat types.

Bush pig dung and tracks were found on slopes of closed forest because this was the most common habitat type. The most preferred habitat type for bush pigs in the northern sector of BINP is lower slopes of closed and open forest because they provide good cover, wet environments and soft ground for uprooting tubers that they feed on: lower slopes of open slopes provide a wide range of primary plant species that form part of the bush pig diet.

The dung accumulated over 141 days gave a density of 181.12 dung piles per square kilometer (95 percent confidence limits 93.764 – 349.840). This was divided by the total number of days and further by a defecation rate from literature of 7 dung piles per animal per day to give a best estimated density of 1.8 bush pigs per square kilometer. This is 0.95 to 3.5 bush pigs per square kilometer (95 percent confidence limits).

In eight months, systematic monitoring of crop loss to bush pigs was also carried out in gardens adjacent to the park boundary in Karangara parish. This revealed that bush pigs destroyed up to 13 percent of the total planted area per season. The distribution of damage was uneven; most crop damage was inflicted on six species of crops. Bush pigs foraged mainly on tubers, particularly those of sweet potatoes and on grain crops, particularly maize. Bush pig crop damage was restricted to

200 meters of the park boundary. Damage and loss were highly localized to a narrow band of fields very close to the forest boundary experienced the most crop loss. Distance of fields to forest boundary and to nearest bush fallow continuous with forest boundary explain the variation in crop damage, intensity and frequency of crop raiding by bush pigs.

Fifty-two farmers of between eighteen to ninety years of age were interviewed. All the women cultivated for a living while eighty percent of the men spent three quarters of day time working on tea plantations. More than 75% of the farmers interviewed in the parishes of Karangara and Bushura considered bush pigs to be an agricultural problem. The proportion of farmers reporting a bush pig problem though did not differ significantly between Karangara and Bushura. In both parishes, farmers' estimation of crop loss differed greatly with systematically quantified crop loss by men who spent the least time cultivating registering higher estimates of crops lost. Damage occurred all year round, but farmers regarded the wet season of February to May as being the time of maximum crop loss. When asked if bush numbers had increased in recent years, 87% of farmers reporting a problem said yes compared with 45% of those not having a bush pig problem.

The majority of farmers interviewed said that bush pigs are a major pest because they come at night in large numbers, and can kill people. Thus, they are regarded as dangerous animals that are able to cause a great deal of damage to people and crops.

A number of bush pig control methods are available but there is not enough information to allow any method to be recommended. Habitat manipulation can offer an effective means of reducing the abundance of problem animals. Before deciding on any management action, a farmer would need to assess the economic loss caused by bush pigs and weigh it against the cost of control measures.

The bush pig crop-raiding problem could increase further with time as the species recover their numbers from past disturbances through illegal hunting. For this reason it is important to find viable control and management options before affected farmers attempt drastic methods.