



Contents lists available at ScienceDirect

Journal of Archaeological Science: Reports

journal homepage: www.elsevier.com/locate/jasrep

Turkeys and their *Koos*: A comparison of what we know about modern and prehispanic techniques of turkey husbandry in the Northern Maya Lowlands

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ARTICLE INFO

Article history:

Received 14 October 2015

Received in revised form 12 May 2016

Accepted 28 May 2016

Available online xxxx

Keywords:

Mexican turkey

Domestication

Wild turkey

Ethnography

Zooarchaeology

ABSTRACT

Domesticated turkeys (*Meleagris gallopavo*) have formed a part of regional subsistence systems in the Northern Maya Lowlands of Mexico's Yucatan Peninsula since their apparent introduction in late pre-Columbian times. Although domestic turkey rearing in the Northern Maya Lowlands seems to slightly predate Colonialism, the use and distribution of domestic turkeys may have been relatively limited prior to historic/modern times. This paper thus explores differences between prehispanic and historic/modern turkey husbandry in the Northern Maya Lowlands based on zooarchaeological data and modern ethnographic interviews and observations conducted in and around the city of Merida, Yucatan, México. The modern ethnographic data are diachronically compared with zooarchaeological information from the Northern Maya Lowlands in order to explore cultural change and continuity regarding the extent of rearing, and the types of turkey husbandry techniques employed in Maya households. Based on the comparison, we highlight the importance of the *Koos*-technique in the Maya area for successful turkey breeding, which may explain why domestic turkeys seem to have had a relatively limited distribution among the pre-Colonial Maya.

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1. Introduction

The prehispanic Maya of the Northern Lowlands used a wide variety of animals for food, but very few animals were actively husbanded in the ancient settlements (Götz, 2008a; Götz and Stanton, 2013; Valadez, 2003a). Before the Postclassic period (~CE 1000–1500), the dog (*Canis lupus familiaris*) was the only domesticated animal used by the ancient Maya, although some data suggest that domesticated Common Turkeys (*Meleagris gallopavo*) were also present at some prehispanic Maya sites (Thornton et al., 2012; Thornton and Emery, 2015). The zooarchaeological data from the Maya area in general indicate that introduced domestic turkeys were held near high status households and structures in prehispanic times, while the quantities of turkeys point towards a moderate to rare use (Götz, 2015; Thornton et al., 2012). Another turkey species, the wild and locally available Ocellated Turkey (*Meleagris ocellata*), was more commonly eaten, presumably after being hunted in or near the agricultural fields. The situation of domestic turkeys in the Maya area thus differed from central Mexico, where domestic turkeys were frequently used for food in pre-Columbian settlements (Valadez, 2003b).

Traditional modern farmers in the Northern Maya Lowlands breed, keep and use a much wider variety of domestic animals than before the Spanish conquest, but among these, the domestic turkey occupies an essential role. Common Turkeys, referred to as “*guajolotes*” in central Mexico and some other parts of the country or “*pavos indios*” in Yucatan, are a valued domesticate frequently bred, eaten and used as an investment for ritual purposes in rural areas among the modern Maya. The Common Turkey bred in rural households also represents a specially valued meal for the urban population of Merida, much more valued than the cheaper “industrial” turkeys that are bred in huge farms outside the city of Merida. The term “*pavos indios*” might thus be recent and originate from urban contexts, marking particularly the difference between the freely wandering Common Turkey of the rural backyards and the artificially held Common Turkey of the industrialized farms.

Historic data further suggest that extensive turkey rearing was common among rural households by early Colonial times (de la Garza [comp.], 1983). In this sense, there seems to have been a radical increase in the extent of turkey husbandry between the prehispanic and Colonial times, which continues to characterize the relationship between turkeys and Maya people in the present day.

The goal of this paper is to propose a technical hypothesis about this apparently radical change in distribution and frequency between the prehispanic and modern/historic occurrences of *Meleagris gallopavo* in the Northern Maya Lowlands. Our paper focuses on the comparison

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between prehispanic, historic and modern domestic turkey husbandry in Yucatan, Mexico based on zooarchaeological material from five prehispanic sites, and modern ethnographic interviews and observations conducted in three rural settlements relatively near (in the range of 1 1/2 h driving distance by car) the modern city of Merida, as well as in a suburban section of the city itself (Fig. 1). The modern ethnographic data are diachronically compared with historic data and zooarchaeological information from the Northern Maya Lowlands in order to explore change and continuity in turkey husbandry between the prehispanic period (with relatively little evidence of domesticated turkey use) and historic/modern times (with frequent use of domestic turkeys). Our particular aim is on how domestic turkeys are handled by the modern rural Maya, and how this information can potentially help elucidate why this bird appears to have had a limited distribution among the Maya before the arrival of the Spaniards, and what likely enhanced the rearing of domestic turkeys in the Maya Lowlands after the arrival of the Spaniards.

2. Overview of the archaeological evidence for turkeys (*Meleagrididae*) in Southeastern Mesoamerica

Domestic vertebrates, defined by Valadez (2003a:17–26) as animals that complete their life cycle under human care in a mutual, economy-based relationship (see also O'Connor, 2000:150–155 and Vigne et al., 2005) were common among Old World Neolithic societies (Davis, 1989:129–134; Gautier, 1990). In contrast, very few domesticated animals were used by the prehispanic Maya who instead relied primarily on wild hunted animal resources, which may have been obtained largely in and around agricultural fields (i.e., via garden hunting; Barrera-Bassols and Toledo, 2005; Ford and Nigh, 2009; Götz, 2014; Jorgenson, 1999). Among the few domestic animals of the prehispanic Maya were dogs (*Canis lupus familiaris*) and Common Turkeys. Dogs

entered the Americas during the first migrations of early hunter-gatherers in the Late Pleistocene (Olsen, 1985; Valadez, 2003a:39–46), presumably spreading throughout the entire continent together with those early human groups. Common Turkeys, however, are indigenous to the Americas and were independently domesticated in both the American Southwest and Central Mexico (Camacho-Escobar et al., 2011:357; Speller et al., 2010a; Valadez, 2003a). Turkeys might have been, for many Mesoamerican cultures, of similar importance as were the llama, vicuña and guinea pig for the prehispanic peoples of South America (see, for example, Mengoni Goñalons et al. [eds.], 2000).

It is not entirely clear when and where Mexican turkeys were first husbanded, but several archaeological finds indicate that these birds were used for ritual and domestic purposes as early as 2000 BCE in northern Mesoamerica (Thornton and Emery, 2015; Valadez, 2003a:97). Remains from *Meleagris gallopavo* have been found in Teotihuacan and at several other precolumbian locations in Central Mexico (Álvarez and Ocaña, 1999:43–44; Götz, 2008b:274; Valadez, 2003a:97–98), where these birds seem to have served as food rather than as a source for feathers (Valadez, 2003b:37). Farther south, in Oaxaca, Common Turkeys occur in Classic and Postclassic contexts at sites such as Mitla Fortress where excavations revealed that turkeys were likely captive-reared (Lapham et al., 2013, and Lapham, this volume).

Although turkey bones are relatively common in prehispanic archaeofaunal samples from the Maya area (see Götz, 2008b:218), the studies conducted to date have identified the majority of remains as the local Ocellated Turkey (*Meleagris ocellata*). The Ocellated Turkey is apparently untamable, and according to many of the rural informants in Yucatan, Mexico we were able to interview, *M. ocellata* tends to die easily in human enclosures or near human housings, and is instead hunted or trapped in the forests near agricultural fields (see also Hamblin, 1984:93; Schorger, 1966, and Steadman, 1980:150). Zooarchaeological identification of turkey bones from the Maya area has been based for many years on Steadman's (1980) osteomorphometric differentiation key for fossil and present *Meleagris* species. A revised discussion of turkey osteology is provided by Emery (this volume), but morphometric species distinctions remain problematic. Regardless, Ocellated Turkey bones have been reported from Preclassic to Postclassic sites in the Maya area including Dzibilchaltun (Wing and Steadman, 1980), Siho (Götz, 2005), Cancun, Tulum, Barton Ramie, Macanche (Steadman, 1980:150), and Mayapan (Pollock and Ray, 1957). Turkey remains at Maya sites are typically recovered from a wide variety of contexts, but are frequently associated with domestic structures and thus interpreted as dietary remains.

A possible scenario is that *M. gallopavo* was first introduced to the Northern Maya Lowlands in the Postclassic period, since the earliest known Common Turkeys from the north of the peninsula were identified in late precolumbian deposits at Champoton, Dzibilchaltun and various sites on the island of Cozumel (Götz, 2006, 2008b:218 and 274, 2012; Hamblin and Rea, 1979). New evidence shows that *M. gallopavo* was introduced much earlier to the Central/Southern Maya Lowlands at the base of the peninsula, where Thornton et al. (2012) document the species' presence in Preclassic (~300 BCE–CE 250) deposits at the site of El Mirador (Peten, Guatemala). Other promising examples of Preclassic and Classic Common Turkeys in the Central/Southern Maya Lowlands area are currently being analyzed. In the light of the present evidence, it is possible that Common Turkeys followed a pattern of introduction and distribution to the Maya area similar to what has previously been documented for the Mexican hairless dog, the *xoloitzcuintli* (*Canis lupus familiaris*), which arrived in the Central Lowlands during the early Classic Period, long before it was distributed to at least two other sites in the Northern Lowlands during the Postclassic Period (Valadez et al., 2010).

3. Archaeological finds of Common Turkeys in the northern lowlands

To begin diachronic comparison of archaeological, historic and ethnographic information about turkey husbandry in the Northern Maya

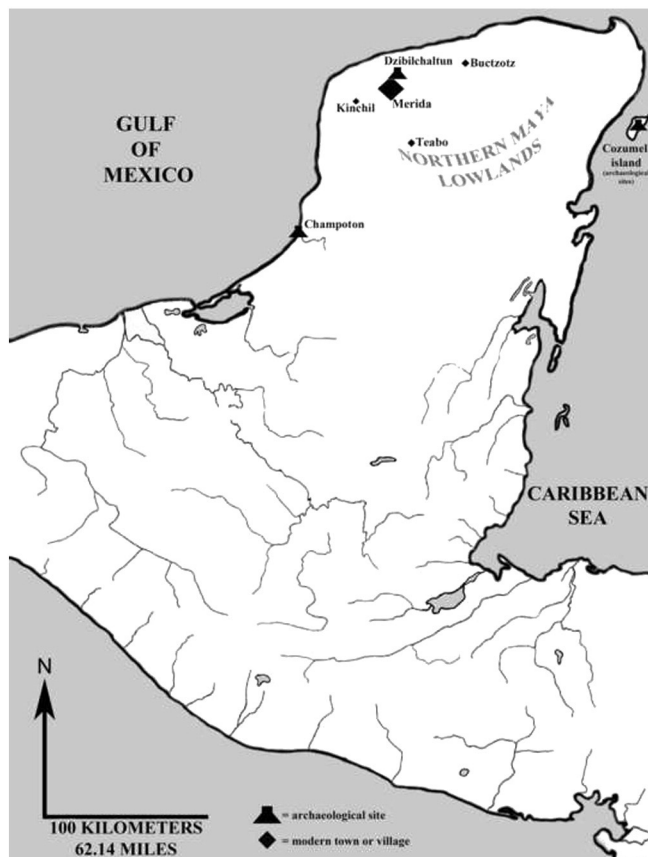


Fig. 1. Map of the Northern Maya Lowlands indicating the archaeological and modern sites used in this study. Map drawn by Chr. Götz.

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