

## LESSER YELLOW-HEADED VULTURES FEEDING ON OIL PALM (*ELAEIS GUINEENSIS*) FRUIT

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The Lesser Yellow-headed Vulture (*Cathartes burrovianus*) inhabits savannahs and marshy areas from northeastern Mexico south to northeastern Argentina (Eitniet 2014). In Belize, the species is common along the shores of freshwater lagoons in the northern portion of the country (Eitniet & McGehee 2017), as well as in the southern coastal savannah (Jones 2004). In the early 1990s, oil palms (*Elaeis guineensis*) were planted at the property of Toledo Agro Produce Ltd. (16.457495° N, 88.510280° W) on the Monkey River road in the northeastern part of the Toledo District, Belize. The southern fence line of the property, and part of the western fence line of the garden, are lined with African oil palms, including 33 mature palms with five young palms planted randomly.

In 2017 Christian Bech observed Lesser Yellow-headed Vultures feeding on the drupes of the oil palm. Most of the palms had been fruiting for approximately 20 years. A smaller section was planted seven years ago and has recently started producing fruits at ground level. To monitor how extensively the vultures feed on the drupes, two SpyPoint model FORCE-10 motion detector cameras (SpyPoint, Victoriaville, Québec, Canada) were placed at the site and relocated between the palms as fruits ripened. The cameras were mounted on wooden poles 5–6 m above the ground, 4–7 m from palms, and generally a little higher than the fruit bunch in order to minimize glare from the sun. The cameras remained at the location from 01 Jan to 31 Dec 2018.

Lesser Yellow-headed Vultures fed on palm fruit in every month except July and August, when no fruit was available (Table 1). Due to technical problems with the cameras, no images were captured in

Table 1. Number of days per month and total monthly images from 1 January to 31 December 2018 when Lesser Yellow-headed Vultures (LYHV) were observed to consume palm fruit.

Month	Days Recorded	Total Images with LYHV
Jan	5	164
Feb	8	4,512
Mar	13	2,049
Apr	2	32
May	16	1,664
Jun	10	933
Jul	0	0
Aug	0	0
Sep	4	0
Oct	13	125
Nov	5	325
Dec		0
Total	76	16,090

December; however, Bech observed from one to seven (n=17 observations) vultures consuming fruit on 12 December.

The fewest days (2 d) during which the species was recorded was in April and the greatest number (16 d) in May. In addition to the Lesser Yellow-headed Vultures, 19 avian species were observed feeding on fruit, including Turkey Vultures (*Cathartes aura*) and Black Vultures (*Coragyps atratus*). Nine species of mammals also fed on the fruit. Although the cameras focused only on a single bunch of fruit, up to 15 Lesser Yellow-headed Vultures were often observed feeding during the heavy fruiting months of May and June.

In the New World, fruits of the imported African oil palm have been consumed by Turkey Vultures (Pinto 1965) and Black Vultures (Haverschmidt 1947, Pinto 1965, Elias & Valencia 1982). In Brazil, Batista da-Silva & Souza (2014), in a sampling effort of 72 hours, made 78 observations of Lesser Yellow-headed Vultures feeding on palm fruits but provided no additional details. Our observations showed that both immature and adult Lesser Yellow-headed Vultures fed on oil palm fruits as long as they were available (Fig. 1), indicating that they were an important food resource. Since individuals were not marked, we could not determine the frequency in which specific individuals fed.



Figure 1. Lesser Yellow-headed Vulture feeding on ripe oil palm fruits.

Despite differences in bill morphology between Turkey and Lesser Yellow-headed Vultures, it is not known if the Lesser Yellow-headed Vulture has a selective advantage for feeding on oil palm fruit (Eitniear & McGehee 2017).

According to the United Nations Food and Agriculture Organization, investment in African oil palms has increased dramatically within the Americas, with the area under cultivation quadrupling in Central America between 2000 and 2016 to total 1.2 million ha of production in the region (FAO 2017). In a study by Bennett et al. (2018), oil palm plantations supported the highest abundance of migratory birds of all cover types, showing that this intensive and expansive monoculture system does provide habitat for some migratory birds. However, oil palms also supported the lowest combined richness and diversity of migratory species, as well as low abundance and richness of conservation-priority migrants, indicating that it has less potential than the hardwood plantation types to host a diverse migratory bird

community. Despite what appears to be an important food resource for some species, conversion of natural savanna to oil palm is likely to have significant negative impacts of bird diversity (López-Ricaurte et al. 2017).

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