Observation of a Trinidad Motmot *Momotus bahamensis* using an anvil to prey on a Manicou Crab *Rodriguezus garmani* (Decapoda: Pseudothelphusidae), in Tobago.

Motmots are highly adaptable birds that predate on a variety of vertebrates including small birds (García-C and Zahawi, 2006), small mammals (Chacón-Madrigal and Barrantes, 2004), amphibians (Master 1999) and invertebrates such as beetles, centipedes, millipedes, cockroaches and scorpions (ffrench 1991). They may strike their prey on the ground, a tree branch or other hard objects to either stun or kill it before swallowing it (Sandoval *et al.,* 2008, Skutch 1971). Forcefully striking their prey may also soften and dismember it for ease of feeding it to young birds (Skutch 1964). The Trinidad Motmot *Momotus bahamensis* has been observed by Rutherford and Bianco (2014), on camera traps and through direct filming, habitually using rocks as anvils to smash open the shells of snails. The majority of shells they observed were from *Plekocheilus glaber* (Gmelin, 1791) (Stylommatophora: Amphibulimidae), a species of land snail. At the anvil sites, the remains of several other taxa including Coleoptera, Decapoda, Diplopoda and Neogastropoda were found, however, there was no direct observation that these remains resulted from predation by the Trinidad Motmot. Some of the remains were from the Manicou Crab *Rodriguezus garmani* (Rathbun, 1898) (Rutherford and Bianco, 2014). The Manicou Crab or Mountain Crab is found in the eastern coastal ranges of Venezuela, Margarita, Trinidad and Tobago (Rodriguez 1966, Rostant 2005) at high elevations (Stonley 1971) in self-constructed burrows, beneath rocks and in between rock crevices near clear, flowing streams. They are generally encountered at night but may be seen out in the open during the day after rainy weather (Maitland 2003). This article serves as confirmation that the Trinidad Motmot utilizes rocks as anvils when predating on the Manicou crab.

On 5 May 2018, at 1119h while trekking along the Gilpin trail, Main Ridge Forest Reserve, Tobago, I observed a Trinidad Motmot perched on a rock projecting approximately 16cm above water level within a shallow, slow-moving stream (Fig. 1) (UTM 20P 1249011N 761200E, elevation 450m above sea level). The bird remained on the rock for about five minutes, allowing the author to photograph it, before taking off towards us and flying very low to the ground to a burrow in the bank of the trail. There, it quickly pulled a Manicou crab out of the burrow and flew over to a rock

Fig. 1 *Momotus bahamensis* perched on a rock, immediately before preying upon a Manicou Crab *Rodriguezus garmani*.

further down, in the middle of the trail. There, it could be seen swinging its head and striking the crab against the rock. The crab would sometimes slip out of the beak of the bird, be ricocheted off the rock to a short distance away and then be retrieved by the bird. It continued its process of extracting the food for around three minutes before flying off into a tree. When observing the anvil site afterwards, we noticed the crab's chelae, its carapace, a few walking legs and other broken pieces of its exoskeleton. The crab was categorized as a sub-adult due to the width of its carapace measuring more than 25mm but less than 50mm and being reddish-brown in colour (Rostant *et al.* 2008). To our knowledge, this is the first recorded observation of Trinidad Motmot using a rock as an anvil to predate a Manicou crab. This note contributes to the information regarding the use of anvils by the Trinidad Motmot and hopes to encourage further research on the use of tools by birds and other animals.

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