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**MAN EATING BY ESTUARINE CROCODILES: THE RAMREE
ISLAND MASSACRE REVISITED**

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MAN eating has been reported among most of the larger crocodylians, but only the Estuarine Crocodile (*Crocodylus porosus*) and Nile Crocodile (*Crocodylus niloticus*) regularly prey on humans (Pooley et al., 1989). The most notorious man eating incident occurred in Burma (Myanmar) during World War II when almost 1000 Japanese soldiers were allegedly killed by Estuarine Crocodiles in a single night (Guggisberg, 1972; Pooley et al., 1989). Man eating by *C. porosus* is well documented (Loveridge, 1944; Neill, 1971; Guggisberg, 1972; Daniel & Hussain, 1973; Allen, 1974; Heatwole, 1975; Webb et al., 1978; Kar & Bustard, 1983; Edwards, 1989; Pooley et al., 1989; Webb & Manolis, 1989), but the human mortality resulting from this attack is unprecedented, and a critical re-examination of the incident is therefore warranted.

The crocodile attack is said to have occurred on Ramree Island, a large (ca. 80 km x 30 km) coastal island in western Myanmar (Figure 1), separated from the mainland by a network of estuarine rivers and extensive mangrove swamps (Figure 2). A combined British and Indian force invaded the island as part of an offensive to recapture Rangoon (Yangon) from the Japanese. Securing the airfields at Kyaukphyu was considered essential to the campaign, and an Allied amphibious assault force landed at the northern tip of Ramree Island on 21 January 1945. The Japanese garrison defending the

island numbered approximately 1000 men. Allied forces rapidly captured Kyaukphyu, and then attacked southward toward Ramree Town. Their position now untenable, the defenders retreated into the extensive mangrove swamps on the eastern side of the island, planning to withdraw to the mainland and rejoin the main Japanese force (Figure 2). However, a Royal Navy flotilla quickly blocked their escape, trapping the Japanese in the swamp (Owen, 1946; Slim, 1956; Slim, 1961; Wright, 1962; Allen, 1984; Hickey, 1998).

It was in this swamp that the Japanese soldiers were supposedly massacred by repeated crocodile attacks. The original account of the incident is provided by Bruce Wright (1962), a Canadian biologist serving with the British forces, who stated:

‘That night [19 February 1945] was the most horrible that any member of the M.L. [Marine Launch] crews ever experienced. The scattered rifle shots in the pitch black swamp punctured by the screams of wounded men crushed in the jaws of huge reptiles, and the blurred worrying sound of spinning crocodiles made a cacophony of hell that has rarely been duplicated on earth. At dawn the vultures arrived to clean up what the crocodiles had left. Of about one thousand Japanese soldiers that entered the swamps of Ramree, only about twenty were found alive’.

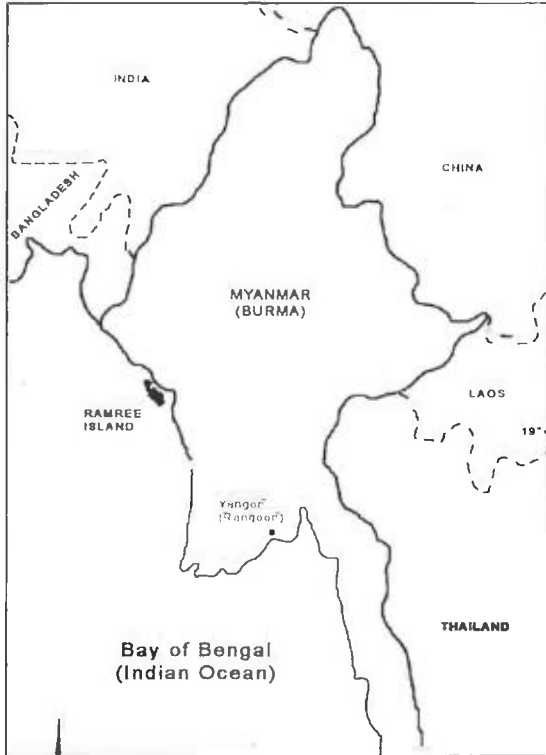


Figure 1. Map of Burma (Myanmar) showing position of Ramree Island relative to the mainland.

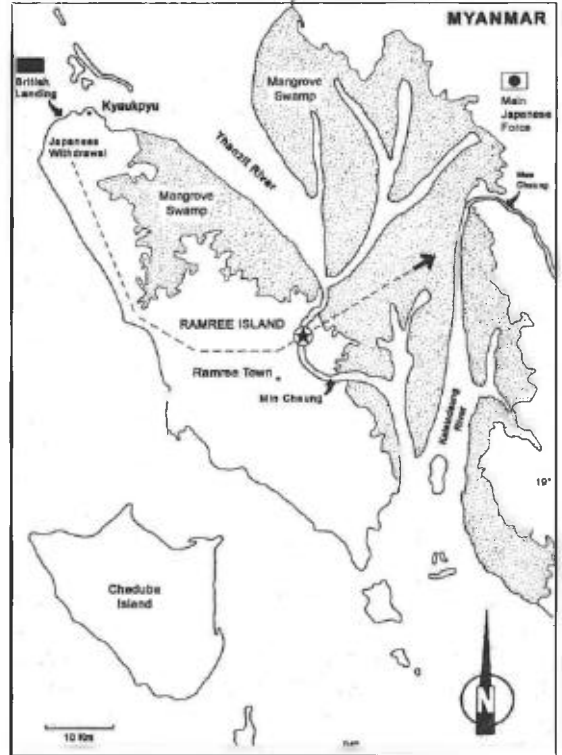


Figure 2. Map of Ramree Island showing major geographic features, Allied and Japanese troop dispositions, military movements, and site of crocodile attack (denoted by star).

Guggisberg (1972) considered this the 'biggest man-eating orgy any crocodilians have ever been offered', and embellished the account by stating that while 'some Japanese were certainly killed by gunfire, [and] others drowned, the majority seem to have been eaten by crocodiles' [*italics added*]. This incident has been uncritically accepted by later authors and recounted in a number of popular and semi-technical publications (Guggisberg, 1972; Capstick, 1977; Capstick, 1981; Campbell & Winterbotham, 1985; Pooley et al., 1989). Only Campbell & Winterbotham (1985) have expressed skepticism concerning the scale of the massacre. However, the events surrounding this incident fail to withstand critical analysis.

First, it is important to note that contrary to the statements of some authors (Guggisberg, 1972;

Campbell & Winterbotham, 1985; Pooley et al., 1989), Bruce Wright was apparently not present on Ramree Island at the time of the massacre, instead being assigned to the Allied crossing of the Ayeyarwady River near Pagan (Wright, 1962). Furthermore, Wright never stated that he actually witnessed the massacre, and unlike the other chapters of his book, the Ramree Island account is written in the third, rather than first person. Although Wright fails to identify a source for his Ramree Island chapter, the story was most likely related to him by friends among the Marine Launch crews. Nor does Wright attribute the majority of Japanese casualties to crocodile predation; this contention appears to have originated with Guggisberg (1972). Wright merely states that only 20 of the original 1000 defenders survived the battle. Prior to describing

the crocodile attacks, he discusses the emaciated condition of the Japanese troops, their reluctance to surrender, and the intense Allied bombardment, implying crocodiles were just one of many hazards faced by the retreating Japanese.

Additionally, there is little evidence in military accounts of the campaign to suggest that a large-scale massacre of Japanese troops by crocodiles actually occurred. Most campaign histories contain no reference to the alleged massacre (Romanus & Sunderland, 1956; Moser, 1978; Allen, 1984). Others are ambiguous or suggest that only a limited number of soldiers were taken by crocodiles. In his memoirs, Lieutenant General William Slim (1956), commander of the Allied forces in Burma, stated the retreating Japanese 'fell victim to naval patrols - and the sharks - as they attempted to reach the mainland'. However, these events are not mentioned in a later, abridged edition of his memoirs (Slim, 1961). According to Hickey (1998), the Japanese 'were forced into one corner of the island where, amongst crocodile-infested swamps, most of them died from drowning, disease or starvation. Only 20 ever surrendered'. The only account suggesting crocodiles were responsible for at least some Japanese casualties is provided by Owen (1946) who noted that 'prey to flies, mosquitoes, scorpions, and most horrible, the crocodiles, and without food or water, the Japanese died in the hundreds. Many were drowned or else crocodiles got them. No more than 20 ever surrendered'.

Most convincingly, during a recent visit to Ramree Island (Platt, 2000), we interviewed a number of older residents who cast additional doubt on the magnitude of the alleged massacre. These individuals ranged from 67 to 86 years old, and all lived on Ramree Island during World War II. Several had billeted Japanese soldiers in their homes, and most were conscripted as porters by the Japanese Army. These individuals all related a similar version of events. The Japanese force retreated into the mangrove swamp and rapidly exhausted their food and

water rations. Fresh water was unavailable and the soldiers were forced to drink brackish water resulting in severe dehydration. Dysentery and other diseases were rampant among the Japanese, and many succumbed to these privations. The only crocodile-related deaths occurred when 10 to 15 soldiers were killed attempting to ford Min Chaung, a tidal creek near Ramree Town (Figure 2). Our informants unanimously discounted any suggestion that large numbers of Japanese fell prey to crocodiles. Moreover, an informant in Kyaukphyu who conducts regular tours for visiting Japanese veterans stated his clients often recount their wartime experiences, but have never mentioned crocodile attacks.

In summary, there is no evidence that a large-scale massacre of Japanese soldiers by Estuarine Crocodiles occurred on Ramree Island during World War II. That nearly 1000 Japanese died is well documented and undisputed; however there is little need to invoke crocodile predation to explain the demise of the Japanese force. Nor is it surprising that only 20 Japanese emerged from the swamp to surrender, for these soldiers were imbued with the Samurai Code of Bushido; death in battle or even suicide was preferable to the dishonour of surrender (Bergerud, 1996). Indeed, the bag of 20 prisoners from an initial force of 1000 is noteworthy, for Japanese typically surrendered at a ratio of only 1 per 120 dead (Chang, 1997; in contrast Allied soldiers surrendered at the rate of 1 per 3 dead). The question is whether the Japanese fell victim to crocodile attack or succumbed to a variety of other causes. In this the historical documentation and our interview data are emphatic; nearly 1000 Japanese soldiers died from combat, disease, starvation, and even shark attack, but only a small fraction of this total fell victim to crocodiles. Crocodiles alone certainly did not decimate the Japanese force.

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