The Republic of the Marshall Islands (RMI) is a Pacific island nation of 29 atolls and five isolated islands (Motteler, 1986) comprising a total land mass of 181 km² and spread out over ca. 1.9 million km² of ocean territory, half way between the Hawaiian Islands and Australia. At least since independence in 1986, RMI has demonstrated an increasing level of environmental activism, spawned initially by the lingering environmental concerns over nuclear testing in some of the outlying atolls (e.g., Bikini Atoll, Eniwetak Atoll; see Carucci, 1997), but which has more recently been eclipsed by efforts to develop a sustainable fishery with reduced risk to endangered species (e.g., Gilman et al., 2014) and by attempts to address and remedy the rise in sea levels caused by climate change (Rudiak-Gould, 2009). Nearly all environmental survey and public policy documents we have been able to locate in online searches pay particular attention to the presence of sea turtles (e.g., Thomas, 1989).

The seven species of sea turtles are among the most widely distributed reptiles on account of their oceanic lifestyle. Their wide ranges not only become apparent from specimens in collections, confirmed sightings of individuals, or the distribution of nesting beaches, but also from extreme distance migrations (e.g., over 20,000 km across the Pacific in *Dermochelys coriacea*; Dutton et al., 2008). Yet due to their lifestyle in a literally very fluid habitat, it is not always easy to pinpoint exact localities of turtle observations; there are many places in the world’s oceans for which turtles are presumed present (e.g., the areas of general distribution in many turtle distribution maps; Anonymous, 2010) but for which no vouchers (accessioned specimens or photographs) are available. It is, therefore, unsurprising to find that the distribution of actual vouchers for sea turtles is rather patchy (and primarily related to human fishing and research activity) and even presents large gaps across all of the world’s oceans. During a brief research visit to Arno Atoll in the RMI as part of the Tropical Research Initiative at Victor Valley College, we discovered a beached turtle, and we report on its identity and the circumstances of the encounter below.

Materials and Methods

Turtle identification was accomplished using the keys in Pritchard and Mortimer (1999). The carapace measurement was made according to Bolten (1999), using a simple string that was subsequently measured with a ruler. GPS coordinates were taken from Google Maps by placing a marker at the locality. Photographs of the individual were deposited in the Herpetological Images collection in the Division of Amphibians and Reptiles, United States National Museum of Natural History, Smithsonian Institution, Washington D.C. (USNM-HI).

Results and Discussion

On 4 July 2016 at 0615 h, we discovered an Olive Ridley Sea Turtle (*Lepidochelys olivacea*) on the east-facing, sandy, lagoon-side beach of Arno Island, Arno Atoll, RMI (ca. 7.0598°N, 171.5574°E). When encountered, the animal was on its back and covered by sand (Fig. 1A) and, at first glance, appeared to be inert and possibly dead. Its position did not indicate a particular struggle in terms of trying to right itself, and its position was well above the high tide line. During an attempt to turn the individual over for proper identification, it began to struggle and appeared to behave...
as would be expected for a turtle in distress. We cleaned off the sand in order to allow for accurate identification and photography and discovered that it was missing its entire right forelimb. The injury was not recent and had completely healed and scarred over. Identification was straightforward based on the characteristic pattern of head scales (Fig. 2) and carapace pattern (Fig. 3). Carapace length (CCL n–t) was ca. 65 cm.

Upon identification, we contacted our colleagues in the sea turtle community to determine whether any

Figure 1. An individual of *Lepidochelys olivacea* found on Arno Island, Arno Atoll, Republic of the Marshall Islands. (A) View of the animal as found on the beach on the morning of 4 July 2016, above the high-tide line (USNM-HI 2854a). It was probably swept onto the beach by unusually large swells from a squall that swept across the Arno lagoon the previous night. The turtle was unable to right itself due to a missing right forelimb. Photo by Morgan Lewis. (B) Just before release, the cleaned individual appeared energetic and no worse for wear (USNM-HI 2854b). Photo by Mitzia Zambada.
First observation of *Lepidochelys olivacea* in the Republic of the Marshall Islands

verified observations of *L. olivacea* existed from the RMI. Whereas *L. olivacea* is known and documented from areas adjacent to continental landmasses in the Pacific (e.g., Zug, 2013), some publications do not list this species for the Central Pacific at all (e.g., Pritchard, 1969; Zug et al., 1998: Map 1; Anonymous, 2010). There currently are few, mostly anecdotal reports from the Central Pacific. The geographically closest verified records (at a distance of ca. 3700 km) are those from Yap State in the Federated States of Micronesia, including several from Yap proper and another from Lamotrek Atoll (Falanruw et al., 1975; Buden and Taboroši, 2016). TTWG (2014) lists the species as “vagrant” for Micronesia. Several other publications list the species for the RMI as “generally present” or “vagrant” (e.g., Pritchard, 1982; Anonymous, 1997; Zug, 2013; Gilman et al., 2014—economic exclusion zone), but without vouchers. It was quite unexpected to find that our observation represented the first vouchered observation of *L. olivacea* for the RMI.

This particular turtle’s disability certainly impacted its ability to function while on land. The missing forelimb appeared to have made it impossible for the animal to right itself, it moved poorly on the sand, and it struggled to gain the escape velocity from the beachside surf. During the night from 3–4 July 2016, Arno Atoll experienced a series of high-wind, heavy rain squalls, which must have been key factors in putting the turtle on its back some distance from the tide line. While it is at best speculation to state whether or not the turtle would have been able to extricate itself from its predicament, it was clearly not moving normally. The local children attempted to recapture the turtle right after our first attempt at releasing it, as it was fighting to swim past the beachside swells. They handled it quite roughly before we interceded, determined that the turtle was uninjured, and placed it into the lagoon and out of their reach. We hope it was able to return into the open ocean without additional challenges.

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**Figure 2.** Head scale morphology of a *Lepidochelys olivacea* individual from Arno Island, Arno Atoll, Republic of the Marshall Islands (USNM-HI 2854c). The pattern appears well within the variation encountered for the species. Photo by Amanda Callahan.

**Figure 3.** Carapace morphology of an Olive Ridley sea turtle (*Lepidochelys olivacea*) from Arno Island, Arno Atoll, Republic of the Marshall Islands (USNM-HI 2854d). The patterns is consistent with that for individuals from populations elsewhere. Photo by Morgan Lewis.
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