



Kiaho‘omana‘o Kai Aupuni ‘o PAPAHĀNAUMOKUĀKEA

He Kukuna Lā Melemele, *Odontanthias fuscipinnus*, ka i‘a ma kēia kāleka. ‘O kēia i‘a ‘āpa‘akuma (‘ike wale ‘ia nō ma Hawai‘i nei) kekahi o nā i‘a kinikini loa i ka hohonu kai ma waena o ka 250 a 330 a ‘oi kapua‘i ma Papahānaumokuākea. He ki‘i kápala gyotaku Kepanī kēia o kekahi la‘ana maoli (15 knm ka lō‘ihi) i ‘ohi ‘ia ma ka moku kua‘au ‘o Holoikaua. Na Keo Lopes – he kanaka lu‘u kai noi‘i– i kápala aku ma luna o ko NOAA moku ‘o *Hi‘ialakai*. ‘O ka limu kekahi lāhulu hou paha o ke ‘anona limu ‘alani *Dictyota*. A i kēia, ua ‘ike ‘ia ‘ewalu lāhulu *Dictyota* ma Hawai‘i nei; ho‘okahi wale nō o lākou he ‘āpa‘akuma ma Hawai‘i. ‘O ka nui maoli (ke ana nui loa): 25 knm



PAPAHĀNAUMOKUĀKEA Marine National Monument

The fish featured on this card is a Yellow Hawaiian Deepwater Anthias, *Odontanthias fuscipinnis*, a Hawaiian endemic (only found in Hawai‘i) that is one of the most abundant fishes between 250 and 330+ feet in the Northwestern Hawaiian Islands. This image is a Japanese gyotaku fish print taken from an actual specimen (15 cm length) collected at Pearl & Hermes Atoll. Research diver Keo Lopes made the print aboard NOAA Ship *Hi‘ialakai*. The limu (marine algae) is possibly a new species in the *Dictyota* genus of brown algae. There are currently eight known species of *Dictyota* in Hawai‘i, only one of which is endemic to Hawai‘i. Actual size (greatest dimension): 25 cm



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Kiaho'omana'o Kai Aupuni 'o

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Kiaho'omana'o Kai Aupuni 'o PAPAHĀNAUMOKUĀKEA

He 'ālo'ilo'i, *chromis struhsakeri*, ka i'a ma kēia kāleka. 'Āpa'akuma i ka pae 'āina 'o Hawai'i ('ike wale 'ia nō ma Hawai'i nei), ua kāmo'o 'ia kēia i'a ma nā 'upena a me nā mokulu'u he 900 kapua'i ka hohonu. He ki'i kāpala gyotaku kēia na Keo Lopes, he kanaka lu'u kai noi'i, o kekahi la'ana (16 knm ka lō'ihī) i 'ohi 'ia ma ka hohonu kai he 220-250 kapua'i ma ka moku kua'au 'o Holoikauaua. He lāhulu *Halymenia* ka limu, he lepeohina ka inoa Hawai'i, i pili ia akua 'o Hina i ka limu, ka 'āpapa, a me ka mahina. Ua kapa 'ia kēia he *Halymenia cromwelli* no ko NOAA moku 'o Townsend Cromwell, i kiwa 'a i nā la'ana o ke 'ano kumu mai ka hohonu kai he 247 kapua'i i ka makahiki 1990. Ua 'ohi 'ia ka la'ana ma keia kāleka mai ka hohonu kai he 264 kapua'i ma ke Āhua Papakū 'o Paionia. 'O ka nui maoli (ke ana nui loa): 15 knm



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The fish on this card is a Struhsaker's Chromis (*Chromis struhsakeri*). Endemic to the Hawaiian Archipelago (meaning they are only found in Hawai'i), these fish have been recorded from trawls and submersible observations as deep as 900 feet. This image is a gyotaku fish print made by research diver Keo Lopes from a specimen (16 cm length) collected at 220-250 ft on Pearl & Hermes Atoll. The limu (marine algae) is a species of *Halymenia*, known in Hawaiian as limu lepe-o-Hina, or "shawl of Hina," a Hawaiian goddess associated with limu, corals and the moon. This species, *Halymenia cromwellii*, was named after NOAA ship Townsend Cromwell, which dredged the original type specimens from 247 feet in 1990. The specimen on this card was collected at 264 feet on Pioneer Bank. Actual size (greatest dimension): 15 cm



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Kiaho'omana'o Kai Aupuni 'o PAPAHĀNAUMOKUĀKEA

He kikākapu basabe, *Prognathodes basabei*, ka i'a ma kēia kāleka i 'ike wale 'ia nō ma Hawai'i nei. 'Oiai ua 'ike mua 'ia kēia i'a mai nā mokulu'u he 20 a'oi makahiki i hala iho nei, 'akahi a hō'ike 'ano 'ia he lāhulu hou ma Kepakemapa, MH 2016. Ua kapa 'ia no Pete Basabe – he loea lu'u ihupani no Kona, Hawai'i, i kōkua ma ka hō'ili'ili 'epeke ma 'ana i nā i'a 'āpapa he nui, pau pū me kēia lāhulu i'a. 'Oiai he holo kōko'olua nā hoa i'a kikākapu o ke kai pāpā'u, he holo kōko'okolu ka ma'amau i waena o nā kikākapu basabe. Pēlā kā ka lu'u kai 'o Keo Lopes e hō'ike mai nei ma kēia ki'i kāpala gyotaku. He lāhulu *Dictyopteris* hou ka limu, he limu lipoa nō ho'i, i 'ohi 'ia mai ka hohonu kai he 300 kapua'i mai ka moku kua'au 'o Mokupāpapa. Ho'ohanohano 'ia ka limu lipoa ma nā mele Hawai'i he nui wale. 'O kēia limu 'ono a 'a'ala ka punahele a ke Kauka Isabella Abbott, ka poloheka kālaimeao la hui ma ke kulanui o Hawai'i ma Mānoa i kaulana a puni ka honua i ke kūkulu papa limu. 'O ka nui maoli (ke ana nui loa): 15 knm.



PAPAHĀNAUMOKUĀKEA Marine National Monument

The fish on this card is *Prognathodes basabei*, a deep-water butterflyfish (8 cm length) found only in Hawai'i. Though the fish was originally observed from submersibles more than 20 years ago, it was finally described as a new species in September 2016. It was named after Pete Basabe, a veteran diver from Kona, Hawai'i, who has assisted with the scientific collection of numerous reef fish, including this species. Unlike their shallow-water cousins that normally group in pairs, *Prognathodes* are typically seen in groups of three, as research diver Keo Lopes depicts in this gyotaku print. The limu (marine algae) is a new species of *Dictyopteris*, also known as limu lipoa, collected at 300 feet from Kure Atoll. Limu lipoa is celebrated throughout the songs of Hawai'i. This spicy, fragrant algae was the favorite edible limu of Dr. Isabella Abbott, the world-renowned algal taxonomist and ethnobotany professor at the University of Hawai'i at Mānoa. Actual size (greatest dimension): 15 cm



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