

# First Records of the Genus *Lepidion* (Gadiformes, Moridae) from Alaska

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## Deep Secrets

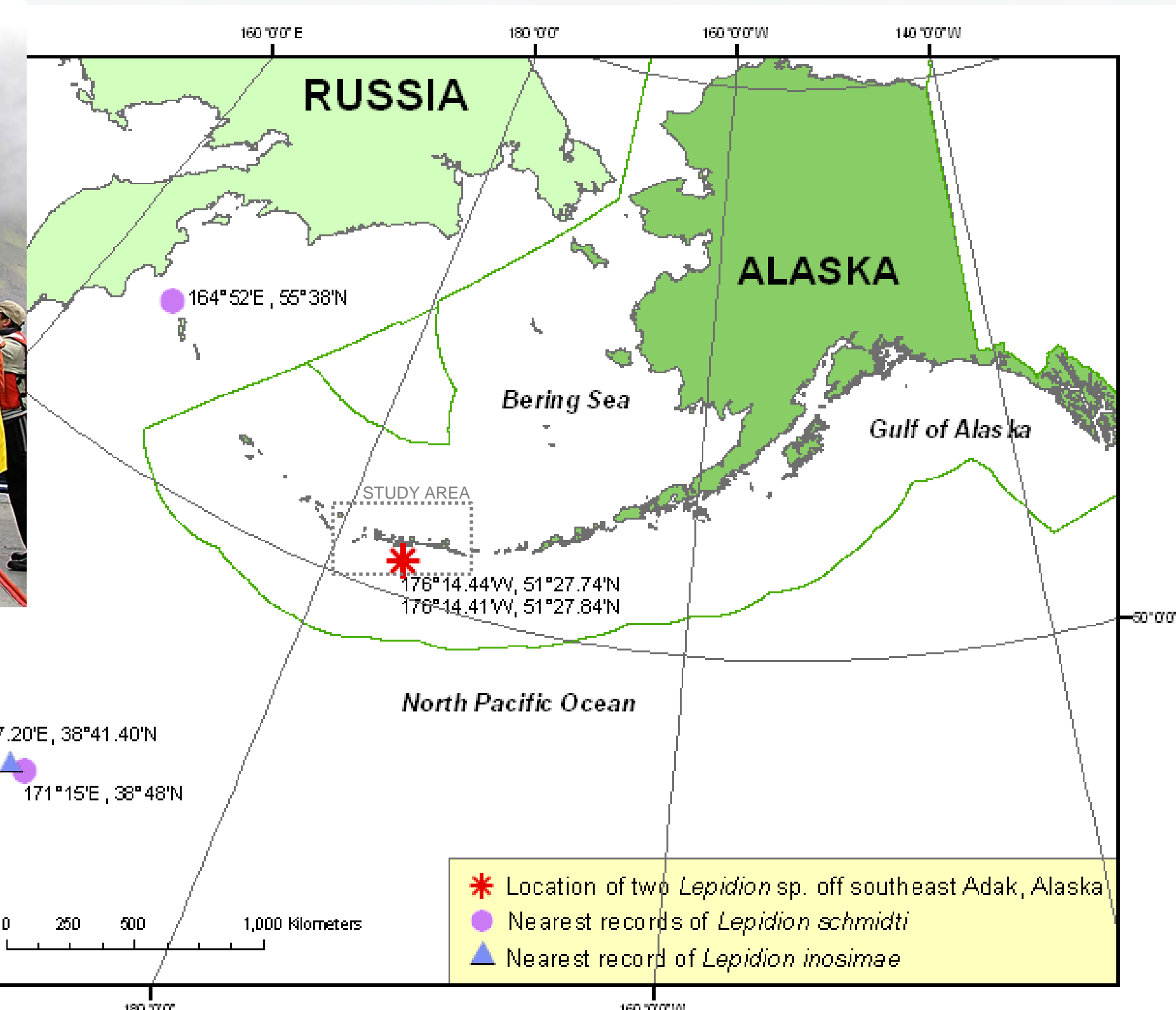
Little is known about the distribution or life history of deep-sea fishes that are unlikely to be sampled with traditional collection methods employed in shallow water habitats. One such group is the family Moridae, commonly known as codlings, hakelings, morids, or deep-sea cods. This family comprises perhaps 100 species world-wide, many poorly known: most are in deep oceanic waters, are small, do not form aggregations, or may be known from only a single collected specimen.

In Alaska, 3 species (3 genera) of codlings have been documented, and a 4th species (representing yet a 4th genus, *Lepidion*) was thought likely to occur because it had been collected as close as Russia (Bering Island).

Here we document that 4th codling genus (*Lepidion*) in Alaska, based on the presence of two fish observed on underwater video footage collected southeast of Adak Island on July 28, 2004.

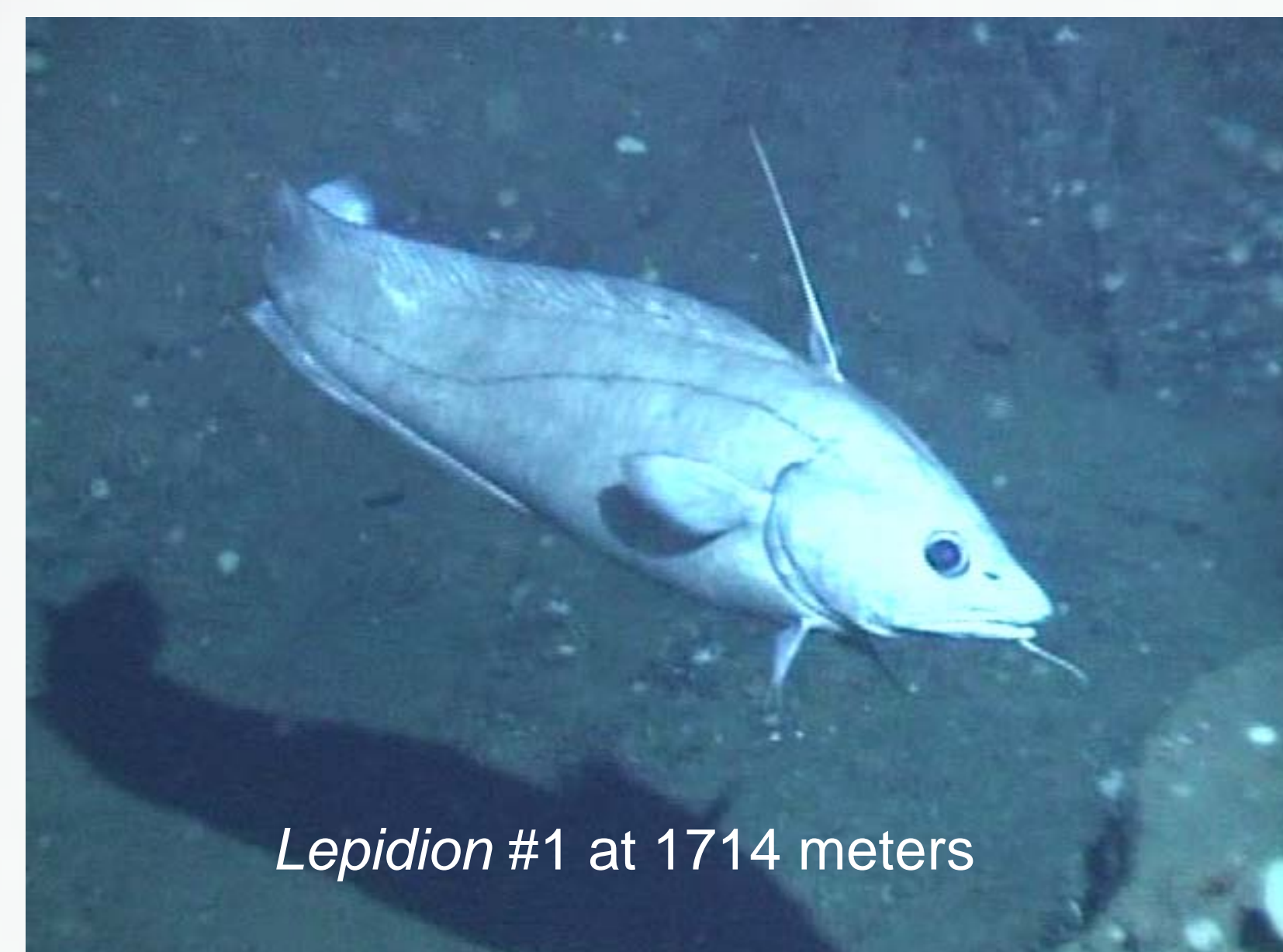
## Methods

We observed an unusual fish (family Moridae) while we were viewing deep-sea video for coral habitat and associated organisms. The seafloor video had been collected by the remotely operated vehicle (ROV) *Jason II*, in the central Aleutian Islands during summer 2004. Video was from:

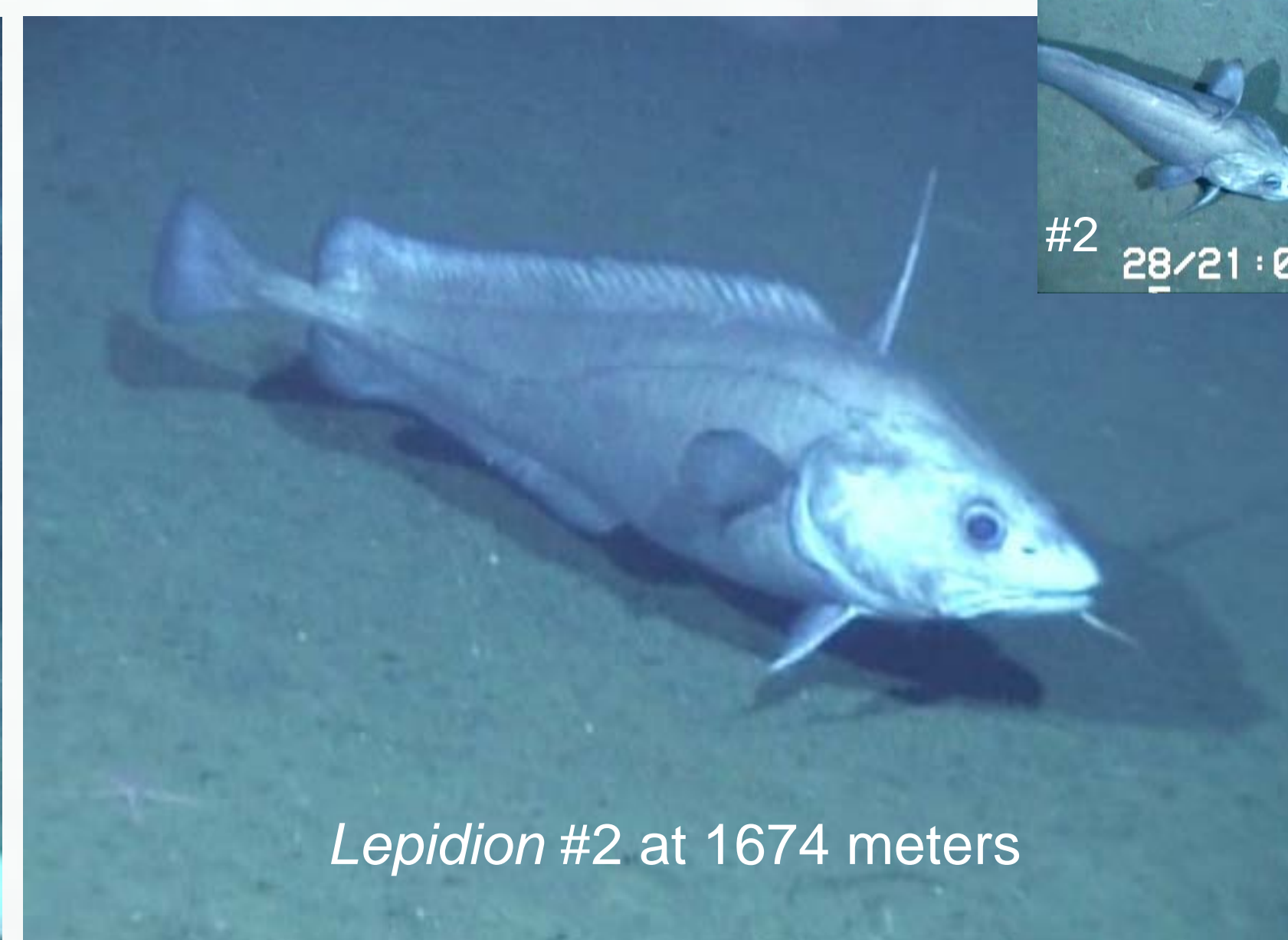


- ▶ 13 sites between Amliia and Semisopochnoi Islands, Bering Sea and North Pacific Ocean, depths from 170 m to 2947 m;
- ▶ three cameras (with paired lasers projected onto the seafloor);
- ▶ DVD (.vob) format; 7 sites analyzed with VideoRuler software, 6 sites visually scanned for uncommon fishes.

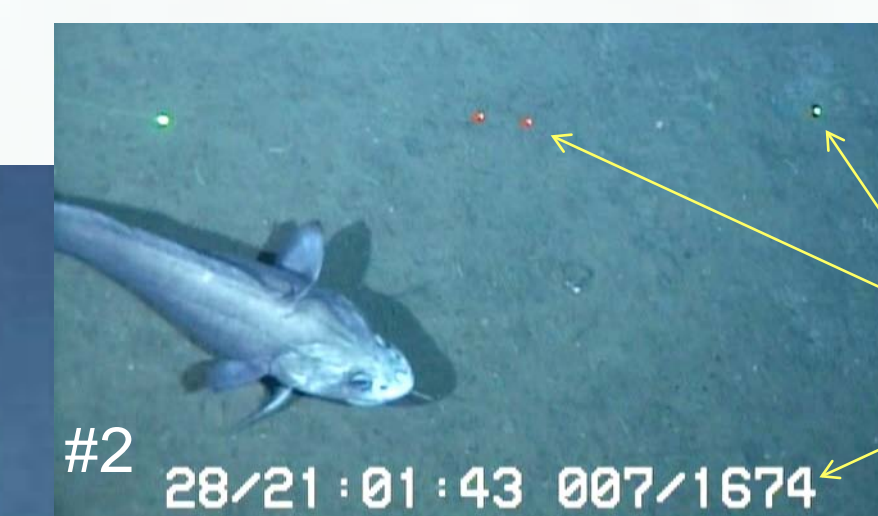
## Results



*Lepidion* #1 at 1714 meters



*Lepidion* #2 at 1674 meters



Dorsal view shows rounded snout. Paired lasers and depth appear on video footage.



*Antimora microlepis*

Two individuals of the unusual morid were observed, both at the same dive site southeast of Adak Island.

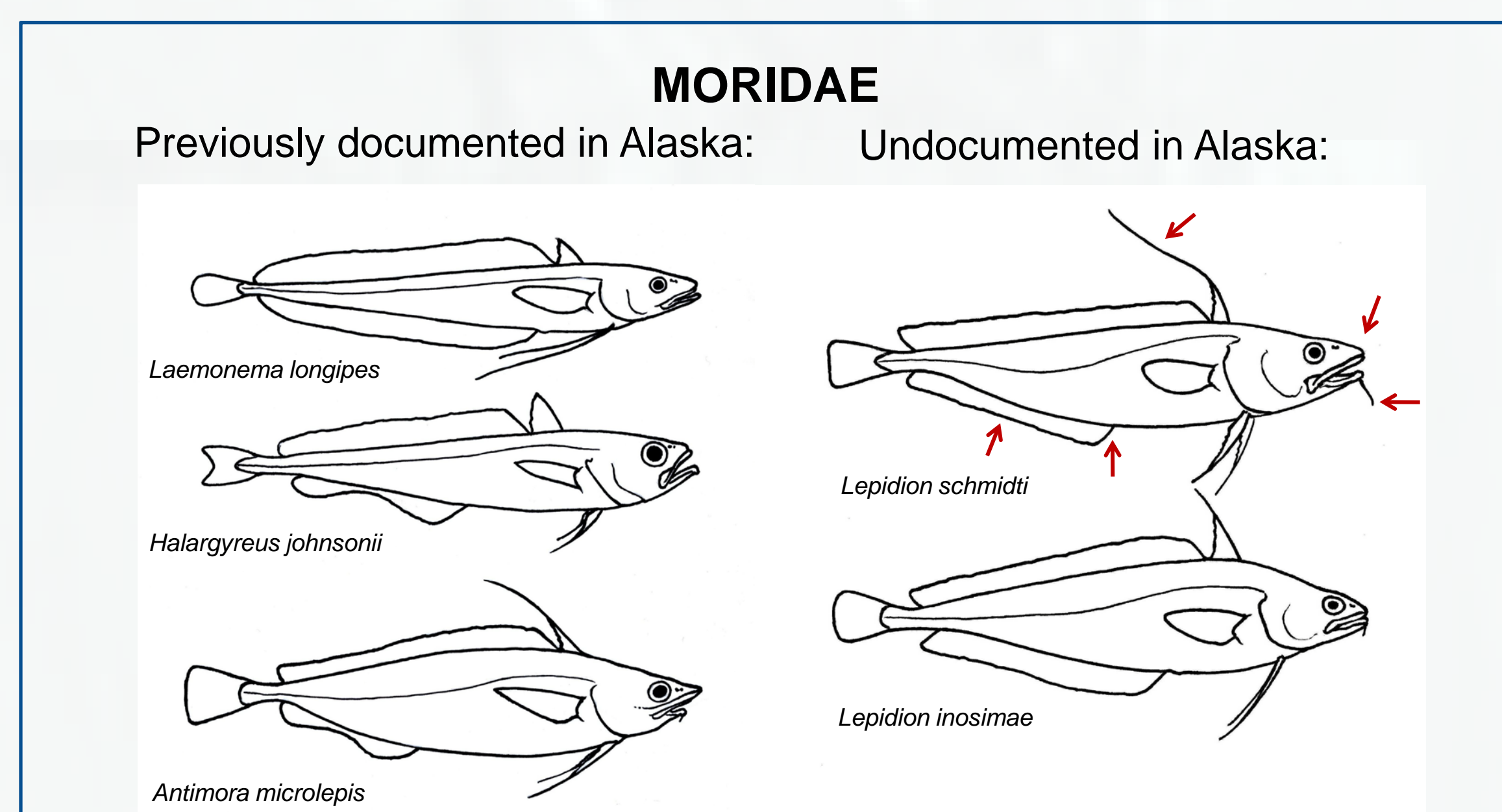
Both had the following characteristics:

- chin barbel longer than eye diameter
- upper jaw slightly protruding, snout round
- 1st dorsal fin greatly elongate
- anal fin origin near body midpoint
- anal fin edge not deeply indented
- large size: greater than 65 cm TL.

We saw only one other morid, *Antimora microlepis* (Pacific flatnose), a species previously documented in Alaska. They were present at most sites.

## What is it?

A *Lepidion* species, probably *Lepidion schmidti* (northern gray hakeling); the definitive way to tell it from *L. inosimae* is by the shape of the vomerine tooth patch and anal fin ray count.



## Summary

- The photos document a range extension for the genus *Lepidion* exceeding 1300 km, and first record from Alaska.
- Information is pertinent regarding morid species because little is known about their ecological role.
- Video is an effective method to “collect” data on seldom-encountered deep-sea fishes.
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## Acknowledgments

We thank B. Moffitt, B. Mundy, J. Orr, and T. Iwamoto for help with ID. The ROV *Jason II* photo is by Sean Rooney. Moridae illustrations (left) were redrawn from Mecklenburg et al. 2002 “Fishes of Alaska” except for *L. inosimae*. Map records are from: Nakaya et al. 1980, Borets 1986, and Sheiko and Tranbenkova 1998. Major funding for research on central Aleutian coral habitat (during which this video footage was taken) was provided by NOAA/NURP; support, including video processing, was provided by NPRB and AFSC NOAA/NMFS.