



Pacific branch («TINRO») of Russian Federal
«Research Institute of Fisheries and Oceanography»
(«VNIRO»)

NPFC-2023-SSC BFME04-IP04



Photo by Igor Maltsev

Skilfish

Erilepis zonifer (Lockington, 1880)

Agenda Item 7. Skilfish in the NPFC Convention Area

7.1 Summary of skilfish distribution, biology and life history

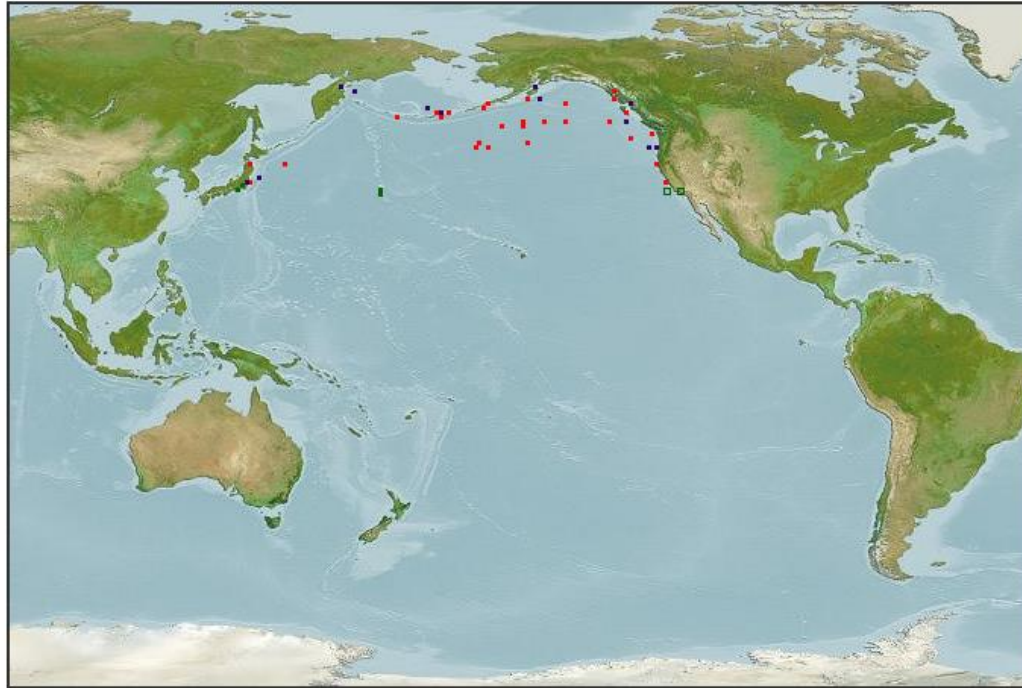
7.2 Summary of skilfish longline fishery characteristics in the NPFC Convention Area



Point Map for *Erilepis zonifer*

Distribution: North Pacific: Japan and Bering Sea to Monterey Bay in California, USA.
Click on map to see points and environmental data.

Map:



Choose a 'World' base map for globe or polar views, or for seamless pan/zoom

<p>Point Legend</p> <ul style="list-style-type: none"> ■ good point ■ good point from country record ■ non-good point non-good point from country record 	<p>Available range map(s)</p> <p>Download data (as csv)</p>	<p>About AquaMaps</p>	<p>-Exit Point Map-</p>
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Map produced by the CMAR [c-squares mapper](#)
Hosted at <https://www.obis.org.au>
[Disclaimer](#) | [Help](#)

c-squares

Page created in 0 seconds. (47 squares)

Mapper version: 3.1.5
Date created (local time): Thu Dec 7 11:55:30 2023

SKILFISH

Erilepis zonifer (Lockington, 1880) is one of two species belonging to the family Anoplopomatidae, and the only species of the genus *Erilepis*.

It is distributed in the North Pacific Ocean, from the Hawaiian Ridge in the south to the Aleutian Islands in the north.



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Photos are taken from
<https://www.fishbase.org.au/v4/summary/4031>

Most commonly, it inhabits deep rocky bottoms. According to published data, it is believed that early juveniles are found in the surface water layer, among floating algae, and are distributed in the open ocean, where they live 4 - 6 years, reaching the length of about 50 cm, after which they switch to the bottom lifestyle. Young fish have bright white spots on their bodies, but with age their color changes to dark gray, and bright markings become duller and less visible as the fish grows. Skilfish has a dark body, nearly black fins, and large blue eyes above a prominent, cavernous mouth like a rockfish. They also have strong tail fins that are equal to or higher than the fish's head. The fish is a predator of large numbers of bony fish such, cephalopod mollusks such as squid and octopus, crustaceans such as shrimps and small crabs, they may also feed on jellyfish.

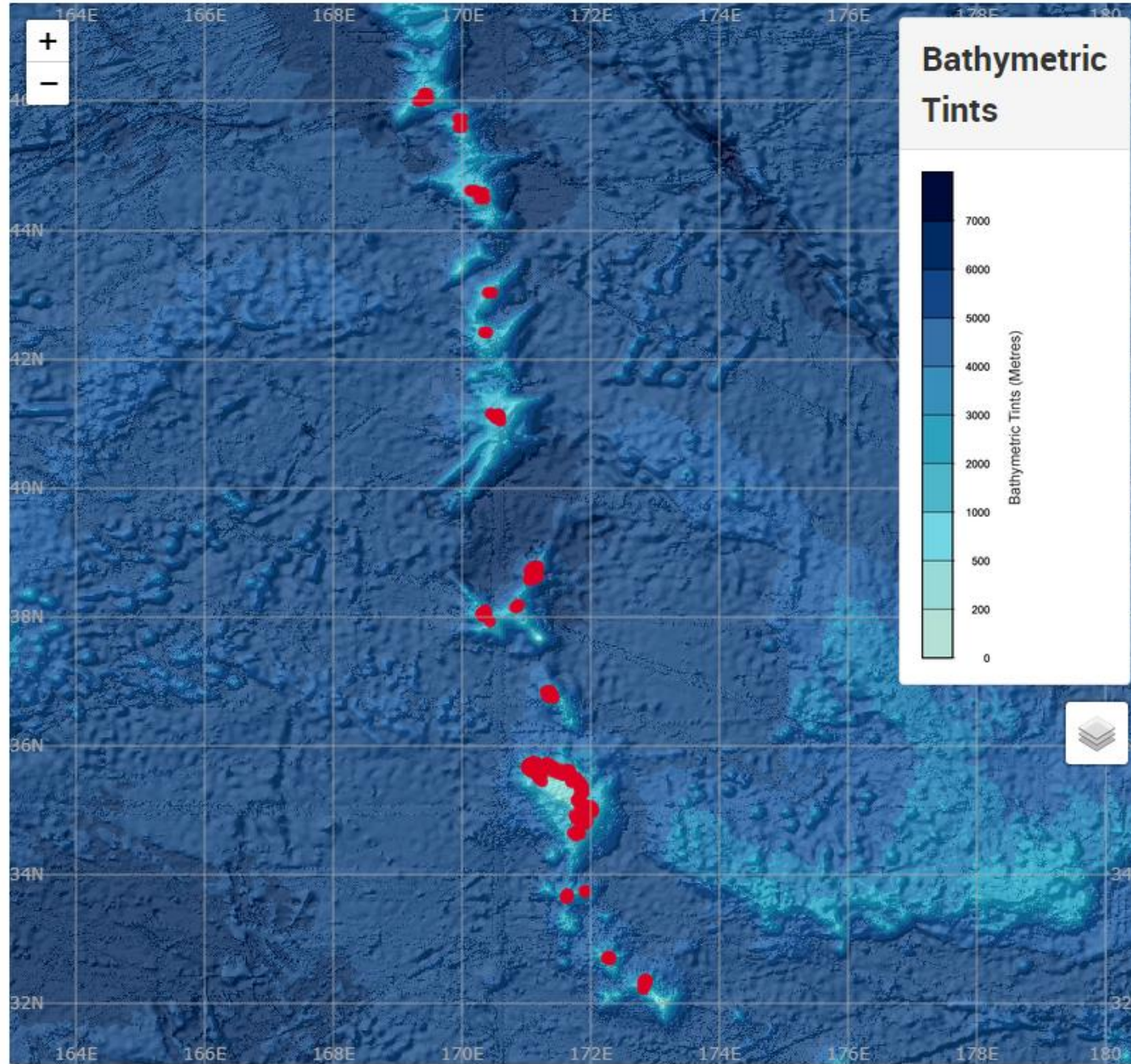


Bottom Fishing Sets and Vessels

Surveyed area by Russian LL

https://www.npfc.int/science/gis/bottom_fishing

7.1 Summary of skilfish distribution, biology and life history



Skilfish was registered on all seamounts in the southern Emperor Seamount Chain (south of 42° E).

Most of the skilfish catches according to the survey data were obtained on seamounts T365+A and Koko, where most of the longline deployments were made.



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NPFC-2023-SSC BFME04-WP14

110) *Erilepis zonifer* (Lockington, 1880) (Anoplopomatidae) Skilfish

FAO Code: ESZ



Counts D XII–XIV-I–II,15–17; A II–III,11–14; P1 16–19; P2 I,5

Diagnosis Body stout, deep. Head large, rounded in dorsal profile. Eye small, its diameter shorter than snout length. Dorsal fins two, separated by a narrow space.

Pectoral fin large, rounded. Caudal fin large, slightly emarginated. Head, back of body and fins dark, with 4–5 large white vertical bands on body side; small white spots scattered on side of body in young. Attaining 1.5 m or larger.

Distribution Subboreal waters of North Pacific. At depths of ca. 580–600 m in the ESC.

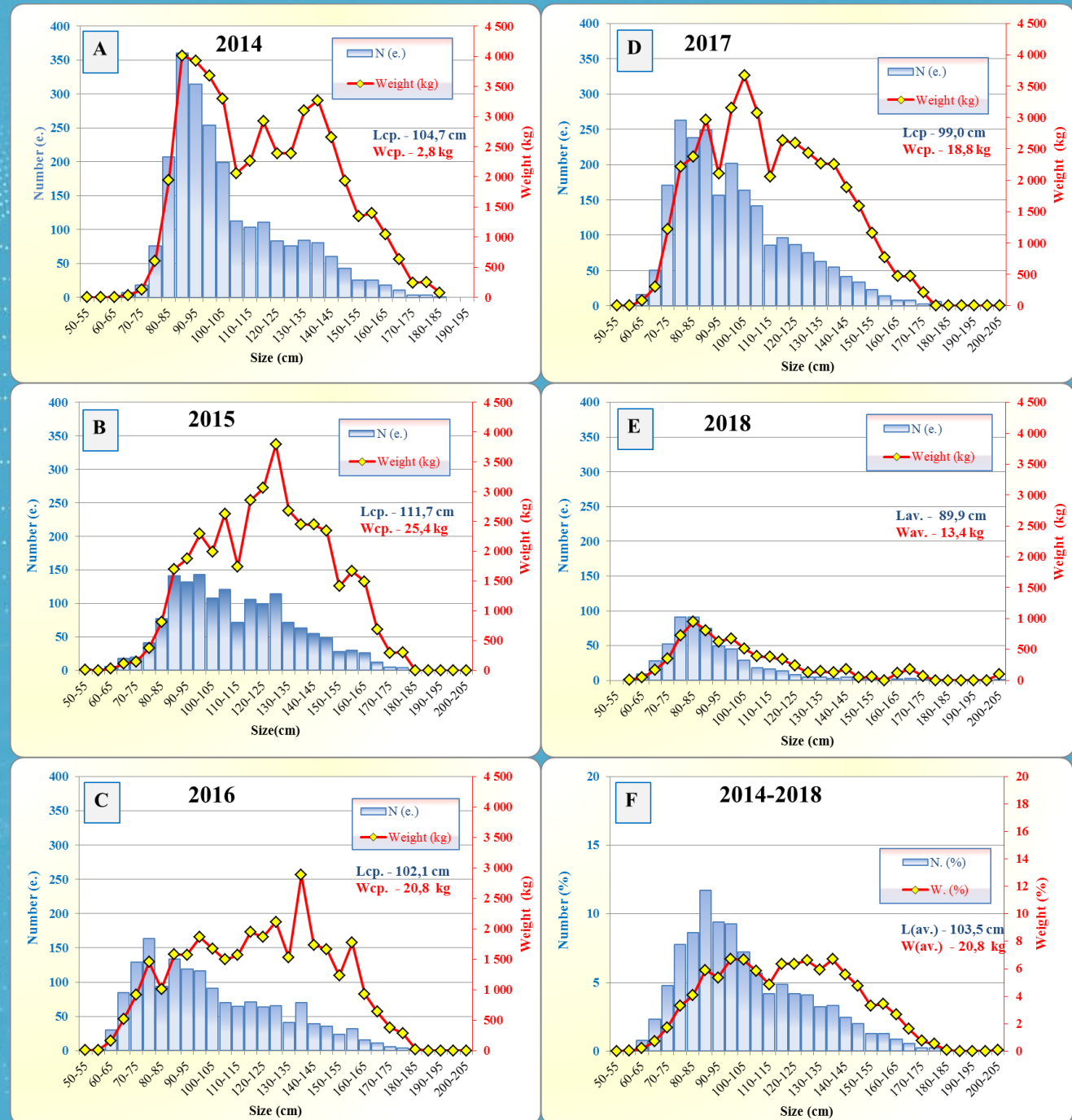
The bathymetric range of this species during the Russian surveys was between **340 and 1300 meters (1438 LL)**



The size composition of the skilfish individuals recorded during the entire study period (Fig. 1) ranged from 55 to 201 cm, with an average length of 103.5 cm. The body weight ranged from 4.0 kg to 102 kg, with an average weight of 20.8 kg.

Figure 1 - Number of specimens and total weight of catches of size groups of skilfish on the underwater rises of the North-Western (Imperial) seamounts based on the results of setting longline formations in the period from 2014 to 2017 on the specialized LL "Palmer":

A- 2014, B - 2015, C - 2016, D - 2017 and in 2018 on the LL "Vostok-7" E - 2018, F - average long-term data in %





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Sexual products of most of the analyzed fish were at stages II and II-III of gonad development.

In 2014, one pre spawning male was observed at stage IV.

Most of the fish had empty stomachs, but considering the depth of habitat, stomachs could be emptied during the stasis period and during sampling.



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Home / PALMER

PALMER

Vessel Flag:
Russia

Authorized By Member/CNCP:
Russia

IRCS:
UBJH2

Registration Number:
PE-1417

Port of Registry:
Petropavlovsk-Kamchatskiy

Vessel Type
Longliners (LL)

Previous Flags
SOUTH AFRICA


Previous Names
Ross Mar

Normal Crew Count:
24

Gear Type:
Set longlines (LLS)

NPFC Vessel ID: 642

Member/CNCP Flagged Vessel



7.2 Summary of skilfish longline fishery characteristics in the NPFC Convention Area



Home / VOSTOK-7

VOSTOK-7

Vessel Flag:
Russia

Authorized By Member/CNCP:
Russia

IRCS:
UCQP

Registration Number:
752

Port of Registry:
Vladivostok

Vessel Type
Longliners (LL)

Previous Flags
JAPAN


Previous Names
KINSAI MARY № 38

Normal Crew Count:
28

Gear Type:
Set longlines (LLS)

NPFC Vessel ID: 1148

Member/CNCP Flagged Vessel





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Home / PALMER

PALMER

Vessel Flag:

Russia

Authorized By Member/CNCP:

Russia

IRCS:

UBJH2

Registration Number:

PE-1417

Port of Registry:

Petropavlovsk-Kamchatskiy

Vessel Type

Longliners (LL)

Previous Flags

SOUTH AFRICA

Previous Names

Ross Mar

Normal Crew Count:

24

Gear Type:

Set longlines (LLS)

NPFC Vessel ID: 642

Member/CNCP Flagged Vessel



7.2 Summary of skilfish longline fishery characteristics in the NPFC Convention Area



Home / VOSTOK-7

VOSTOK-7



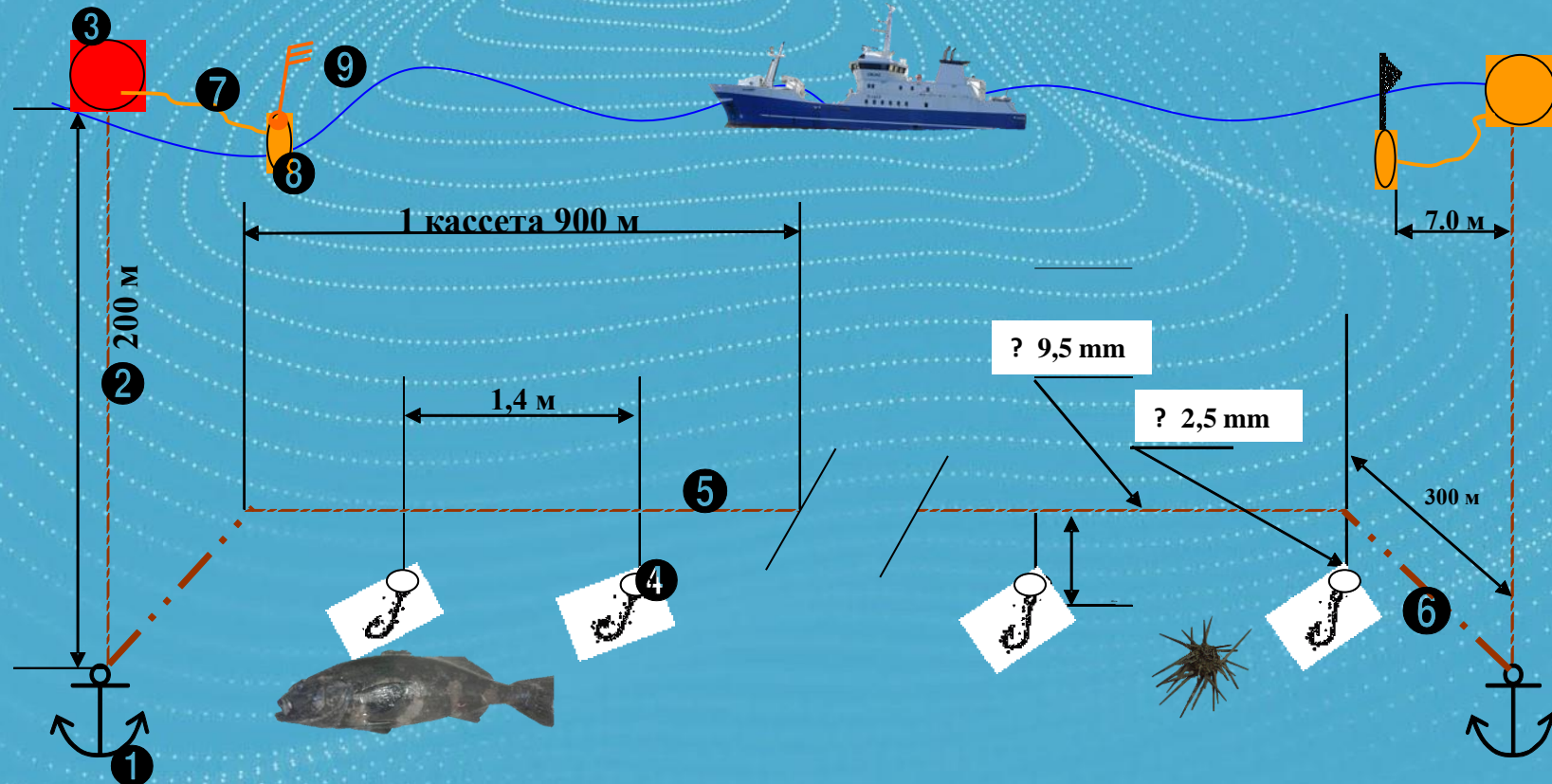
28

Gear Type:

Set longlines (LLS)



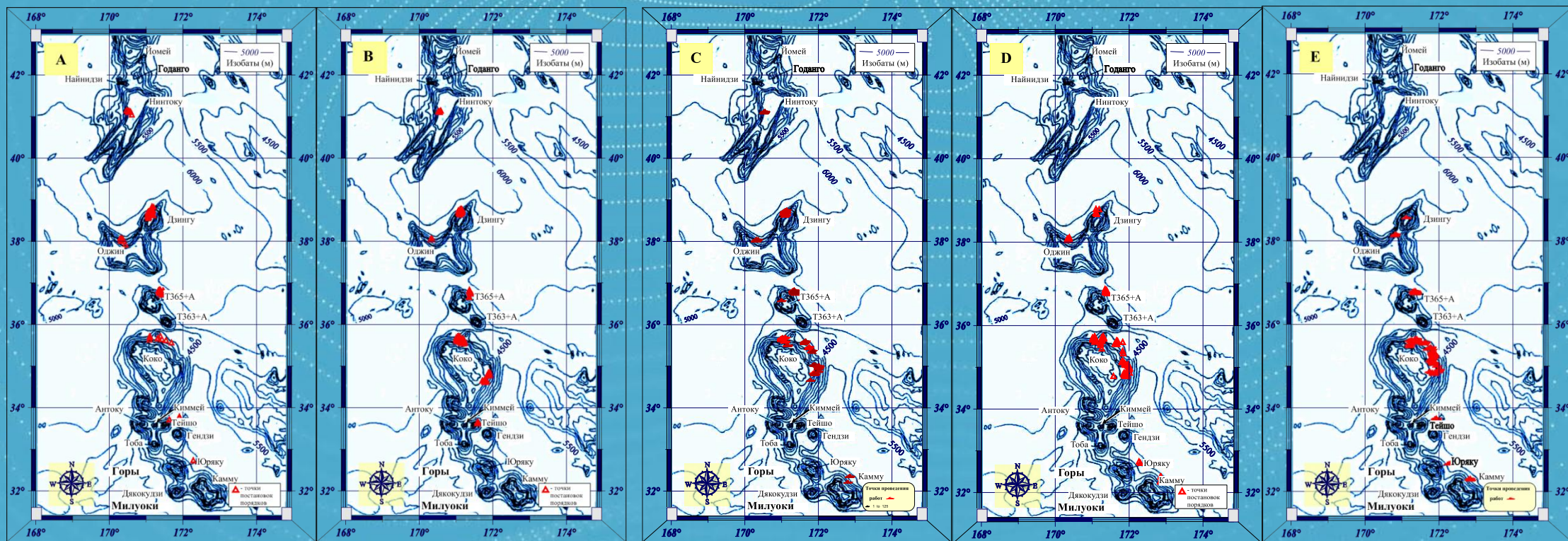
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MUSTAD №14 (39-975)



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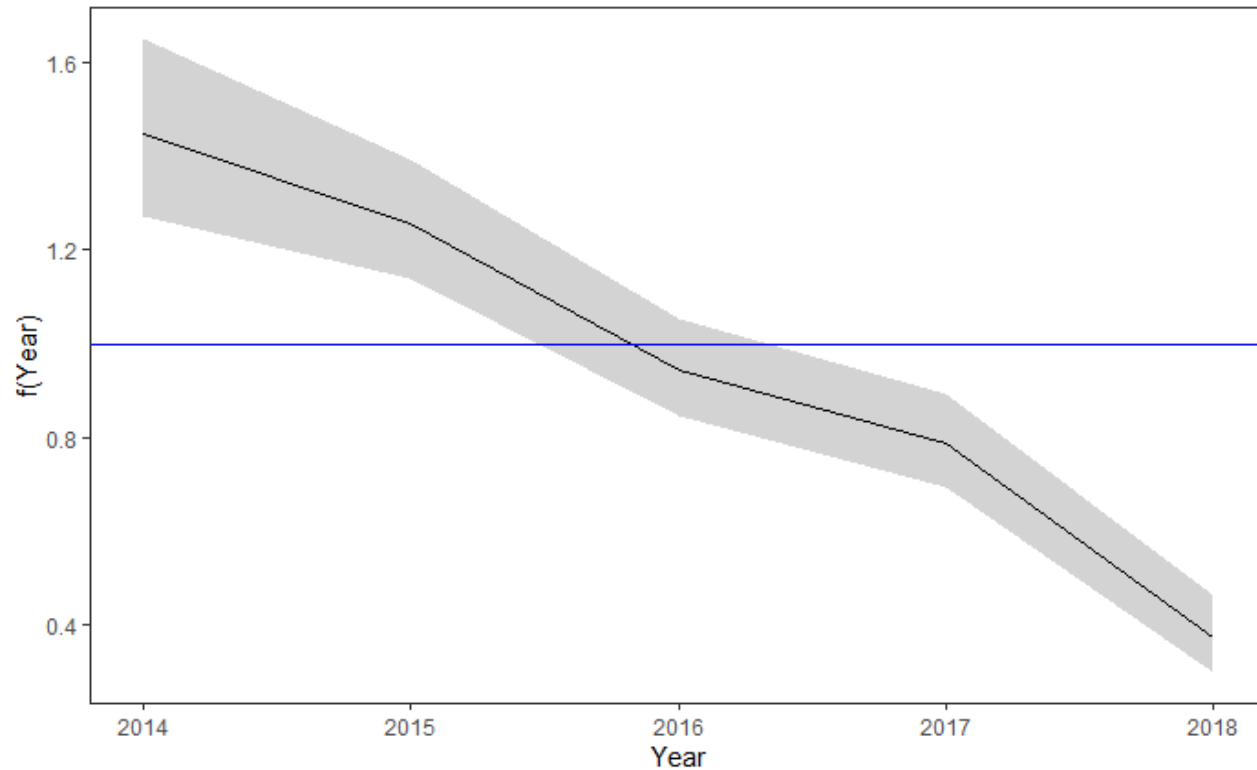


The signs mark the points where skilfish was observed in the period from 2014 to 2017 on the specialized LL vessel "Palmer":

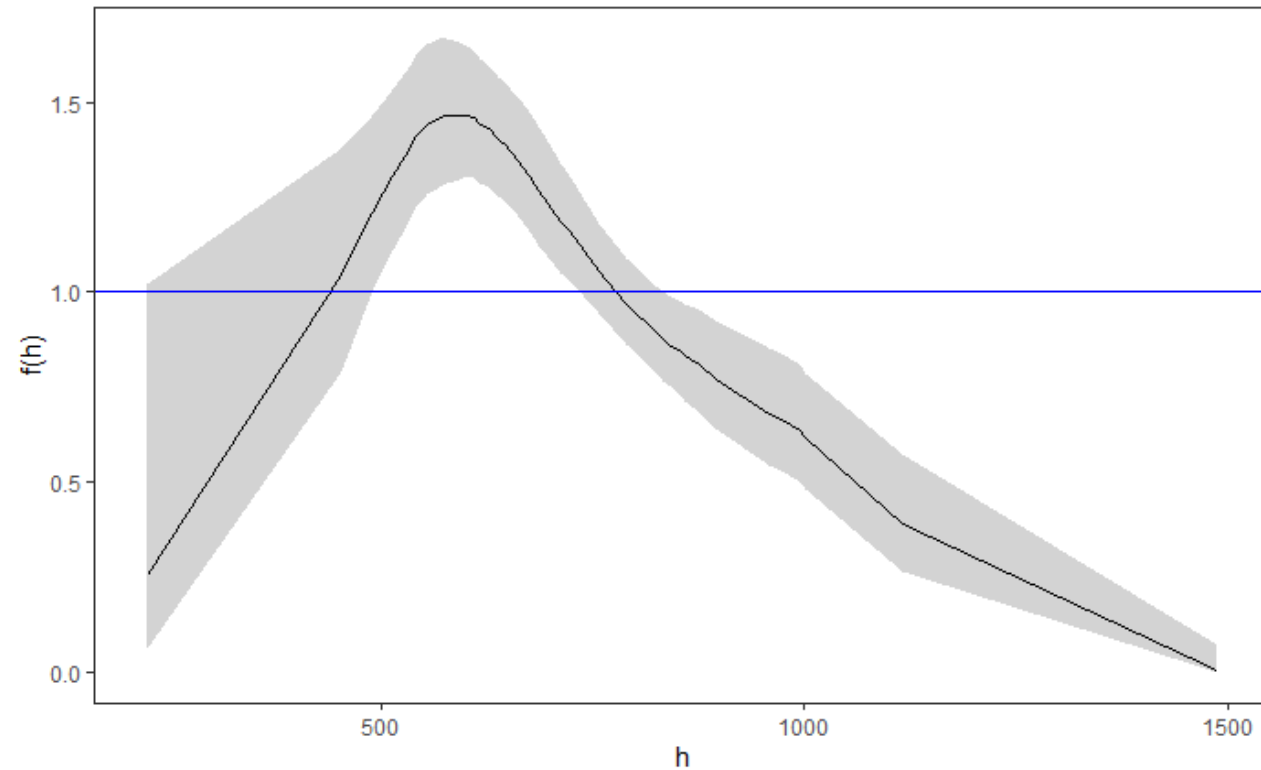
A- 2014, **B** -2015, **C** - 2016, **D** – 2017 and in 2018 on LL "Vostok-7" **E** - 2018



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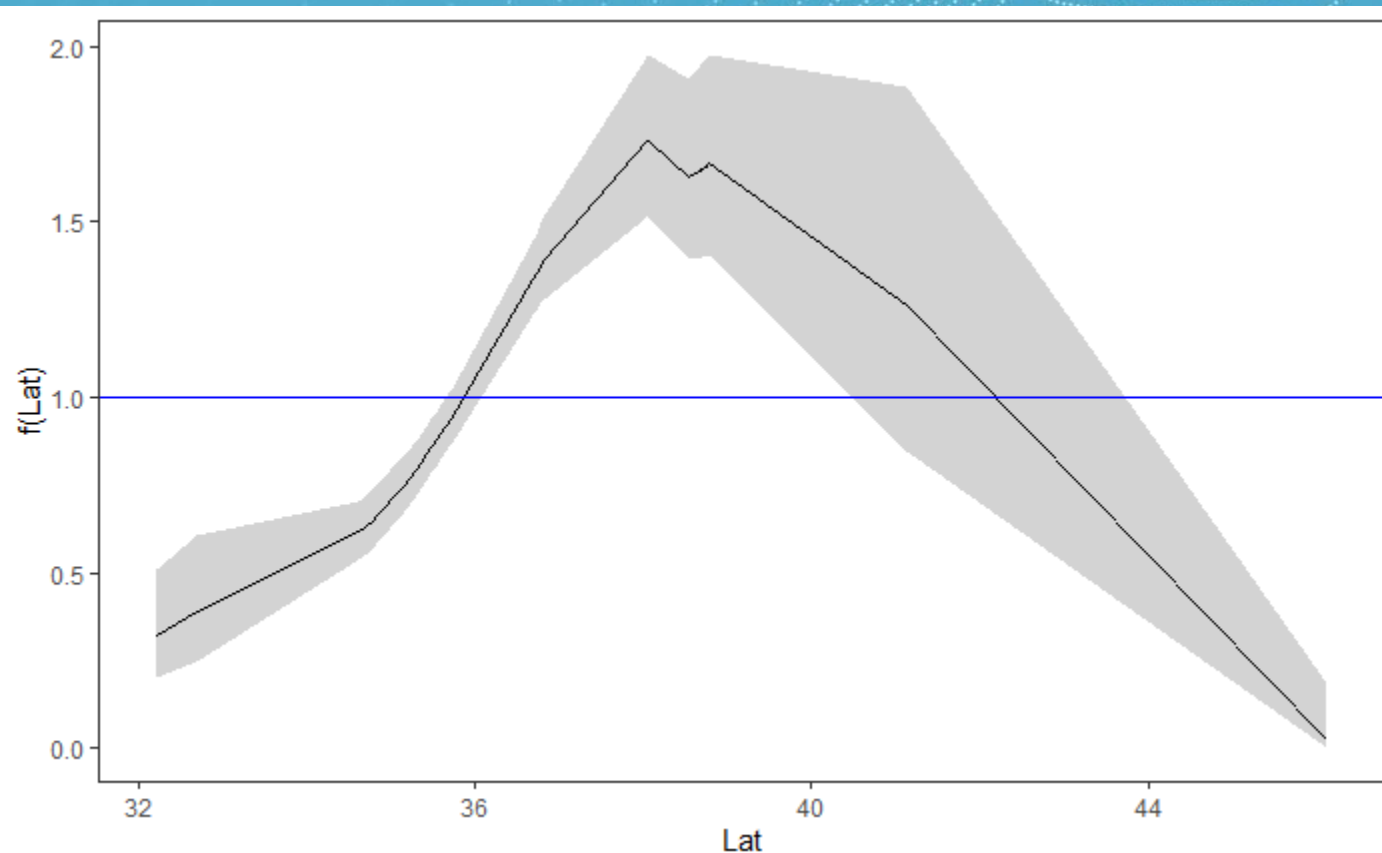
Accumulated Local Effect of Year



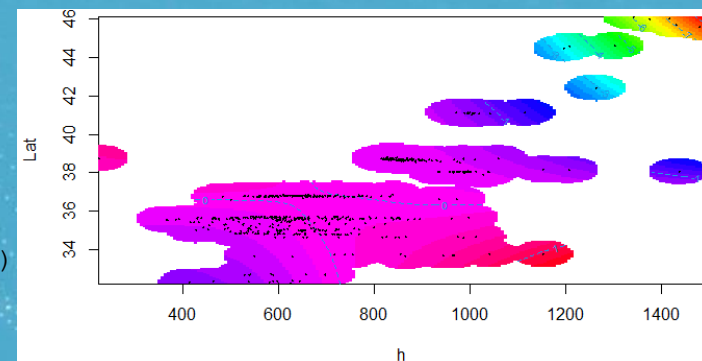
Accumulated Local Effect of
depth (h, m)



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Accumulated Local Effect of Latitude



Family: Tweedie (p=1.545)
Link function: log

Formula:
 $\text{kg.kh} \sim \text{ti}(\text{Year}) + \text{ti}(h) + \text{ti}(\text{Lat}) + \text{ti}(h, \text{Lat})$

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	5.3324	0.0634	84.11	<2e-16 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
ti(Year)	3.454	3.834	29.215	< 2e-16 ***
ti(h)	3.591	3.883	11.137	< 2e-16 ***
ti(Lat)	1.595	1.905	23.565	< 2e-16 ***
ti(h,Lat)	4.817	6.146	5.732	6.88e-06 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

R-sq.(adj) = 0.273 Deviance explained = 35.8%
-REML = 3555.7 Scale est. = 7.0246 n = 591



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The Catches of skilfish (*Erilepis zonifer*) in the Convention Area by years

Year	2014*	2015*	2016*	2017	2018**	2019	2020	2021
Tons	190.6	158.3	118.4	90.1	53.0	0	0	126.5

* - according to the data, passes as Rockfishes (caught by the LL "Palmer")

** - catch of LL vessels "Vostok-7"



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Thank you for your attention!