FMA Length Verification

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Introduction

The following document was created to provide the Fisheries Management and Analysis (FMA) Division of the Alaska Fisheries Science Center (AFSC) with records and historical data of fish encountered during the annual surveys of the Resource Assessment and Conservation Engineering (RACE) Division of the AFSC. Species found in this list were supplied by FMA and can be found in a CSV file in the projects code. Data for these species was pulled from the RACE database from 2005 to present. This was done to enure that data used was not outdated, and only encompassed the last ~20 years of data.

Findings for each species are provided in 3 ways; Firtly the number of records is provided. In a number of species the data contained in the respective database (RACE or FMA) is limited, and have a small number of instances. The total numbers are provided to give context to data and to help reviewers determine which method below may best fit their use. Secondly a minimum and maximum lengths are listed for each species. Thirdly a 95% confidence interval is provided. These represent the lengths that 95% of all encountered species on RACE surveys or Observer Data fall into. Lastly a graph is provided to visually assess these values and see where the rises and falls in the length data occur. In this way a reviewer can see where the greatest percentage of lengths starts to increase or decrease and see where the previously listed values fall on this curve. The 95% confidence interval is shaded in this plot in blue in RACE data, and red in FMA data.

species: BAIRDI TANNER CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: **219,090** Minimum: **3 cm** | Maximum: **198 cm** 95% Interval: **53 cm** to **153 cm**

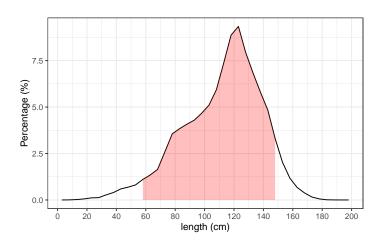


Figure 1: FMA database lengths for BAIRDI TANNER CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: OPILIO TANNER CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 166,563 Minimum: 3 cm | Maximum: 188 cm 95% Interval: 48 cm to 128 cm

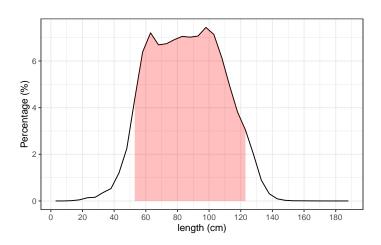


Figure 2: FMA database lengths for OPILIO TANNER CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BLUE KING CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: **4,648** Minimum: **18 cm** | Maximum: **203 cm** 95% Interval: **68 cm** to **153 cm**

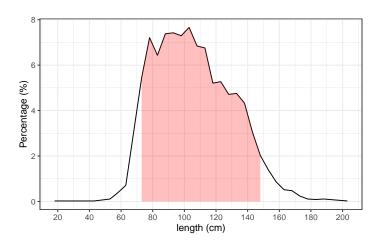


Figure 3: FMA database lengths for BLUE KING CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BROWN (GOLDEN) KING CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: **14,966**Minimum: **13 cm** | Maximum: **258 cm**95% Interval: **48 cm** to **158 cm**

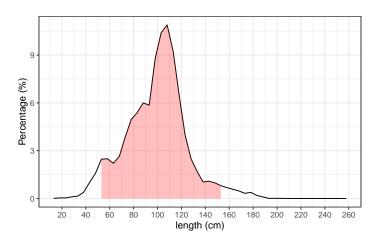


Figure 4: FMA database lengths for BROWN (GOLDEN) KING CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: RED KING CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: **38,439**Minimum: **13 cm** | Maximum: **298 cm**95% Interval: **78 cm** to **178 cm**

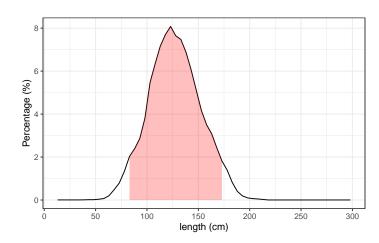


Figure 5: FMA database lengths for RED KING CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: COUESI KING CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 874

Minimum: 33 cm | Maximum: 183 cm

95% Interval: $\bf 58~cm$ to $\bf 153~cm$

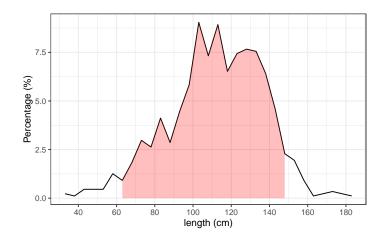


Figure 6: FMA database lengths for COUESI KING CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: TANNERI TANNER CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: **3,509** Minimum: **23 cm** | Maximum: **188 cm** 95% Interval: **63 cm** to **163 cm**

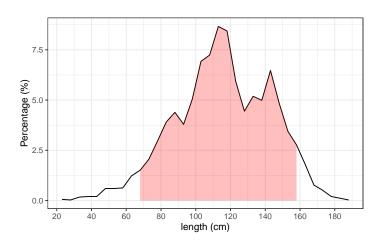


Figure 7: FMA database lengths for TANNERI TANNER CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ANGULATUS TANNER CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 655

Minimum: 18 cm | Maximum: 148 cm

95% Interval: **38 cm** to **133 cm**

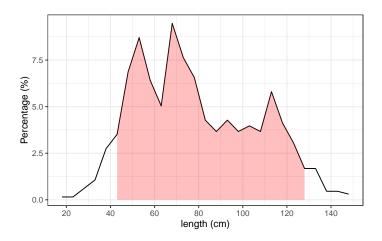


Figure 8: FMA database lengths for ANGULATUS TANNER CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: HYBRID TANNER CRAB

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 8

Minimum: **68 cm** | Maximum: **143 cm** 95% Interval: **69.75 cm** to **141.25 cm**

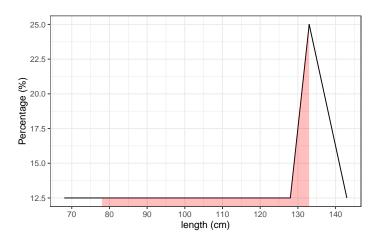


Figure 9: FMA database lengths for HYBRID TANNER CRAB as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SQUID UNIDENTIFIED

RACE DATA

Number of Records since 2005: 10

Minimum: 5 cm | Maximum: 8 cm 95% Interval: 5 cm to

 $7.775~\mathrm{cm}$

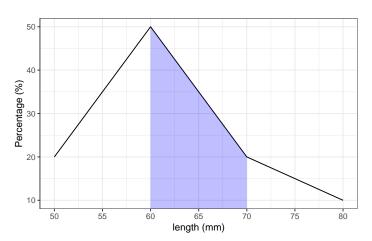


Figure 10: RACE database lengths for SQUID UNIDENTIFIED lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 202,897

Minimum: 2 cm | Maximum: 109 cm

95% Interval: 12 cm to 28 cm

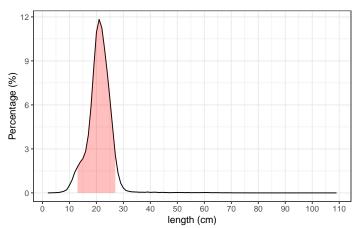


Figure 11: FMA database lengths for SQUID UNIDENTI-FIED as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PACIFIC SLEEPER SHARK

RACE DATA

Number of Records since 2005: 187

Minimum: $\mathbf{66}$ cm | Maximum: $\mathbf{428}$ cm 95% Interval: $\mathbf{78.3}$

 ${f cm}$ to ${f 323.35}$ ${f cm}$

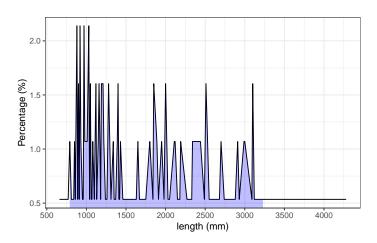


Figure 12: RACE database lengths for PACIFIC SLEEPER SHARK lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 8

Minimum: 89 cm | Maximum: 186 cm 95% Interval: 91.275 cm to 177.95 cm

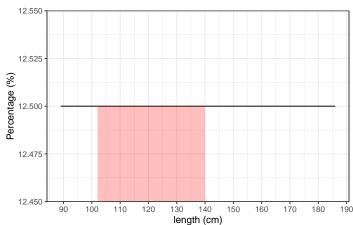


Figure 13: FMA database lengths for PACIFIC SLEEPER SHARK as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: THRESHER SHARK

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 4

Minimum: 210 cm | Maximum: 390 cm 95% Interval: 213.375 cm to 389.25 cm

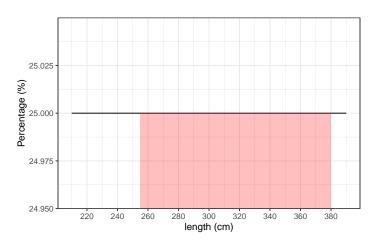


Figure 14: FMA database lengths for THRESHER SHARK as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SOUPFIN SHARK

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 3

Minimum: 160 cm | Maximum: 180 cm 95% Interval: 160.85 cm to 179.85 cm

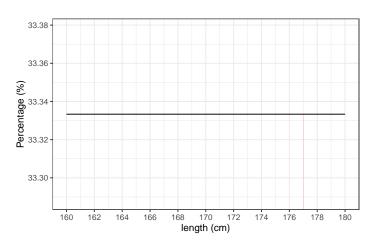


Figure 15: FMA database lengths for SOUPFIN SHARK as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SPINY DOGFISH SHARK

RACE DATA

Number of Records since 2005: 6,168

Minimum: 22 cm | Maximum: 118 cm 95% Interval: 61

 ${\bf cm}$ to ${\bf 97}$ ${\bf cm}$

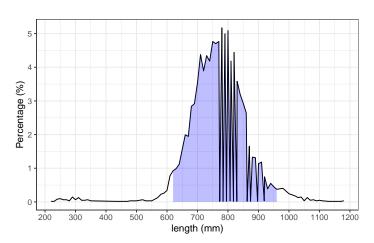


Figure 16: RACE database lengths for SPINY DOGFISH SHARK lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 39,981

Minimum: $12 \text{ cm} \mid \text{Maximum: } 122 \text{ cm}$

95% Interval: **28 cm** to **86 cm**

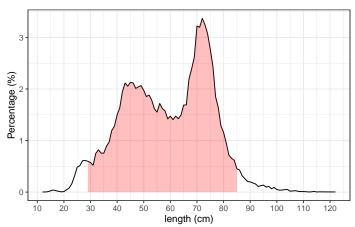


Figure 17: FMA database lengths for SPINY DOGFISH SHARK as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SALMON SHARK

RACE DATA

Number of Records since 2005: 5

Minimum: **191 cm** | Maximum: **270 cm** 95% Interval:

 $192.7~\mathrm{cm}~\mathrm{to}~265.1~\mathrm{cm}$

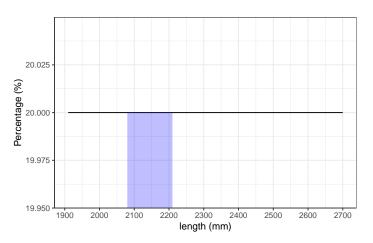


Figure 18: RACE database lengths for SALMON SHARK lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 77

Minimum: 145 cm | Maximum: 238 cm 95% Interval: 149.5 cm to 230.7 cm

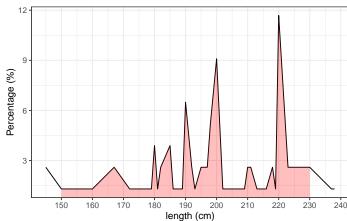


Figure 19: FMA database lengths for SALMON SHARK as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BLUE SHARK

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 5

Minimum: 111 cm | Maximum: 182 cm 95% Interval: 116.9 cm to 181.6 cm

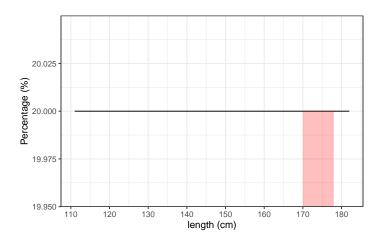


Figure 20: FMA database lengths for BLUE SHARK as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: GIANT GRENADIER

RACE DATA

Number of Records since 2005: 67,159

Minimum: 1 cm | Maximum: 73 cm 95% Interval: 18 cm

to 39 cm

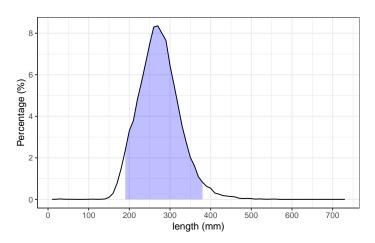


Figure 21: RACE database lengths for GIANT GRENADIER lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 35,354

Minimum: 2 cm | Maximum: 95 cm

95% Interval: $\mathbf{21}\ \mathbf{cm}$ to $\mathbf{41}\ \mathbf{cm}$

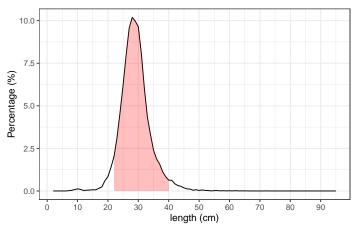


Figure 22: FMA database lengths for GIANT GRENADIER as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ALEUTIAN SKATE

RACE DATA

Number of Records since 2005: 8,123

Minimum: 4 cm | Maximum: 160 cm 95% Interval: 26 cm

to 143 cm

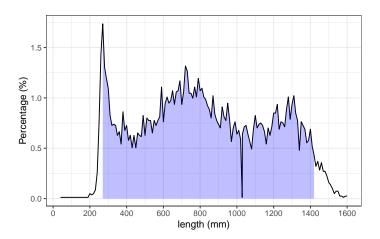


Figure 23: RACE database lengths for ALEUTIAN SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 17,797 Minimum: 11 cm | Maximum: 200 cm 95% Interval: 33 cm to 142 cm

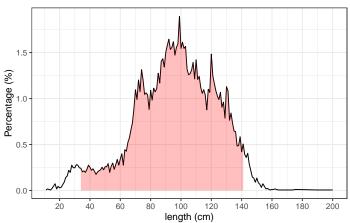


Figure 24: FMA database lengths for ALEUTIAN SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ALASKA SKATE

RACE DATA

Number of Records since 2005: 78,335

Minimum: 4 cm | Maximum: 153 cm 95% Interval: 29 cm

to 106 cm

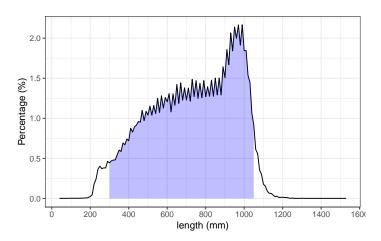


Figure 25: RACE database lengths for ALASKA SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 306,488

Minimum: 4 cm | Maximum: 170 cm 95% Interval: 36 cm to 108 cm

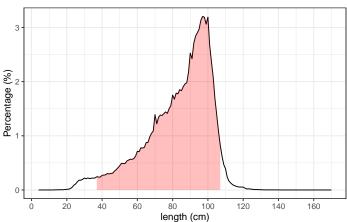


Figure 26: FMA database lengths for ALASKA SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ROUGHTAIL SKATE

RACE DATA

Number of Records since 2005: 956

Minimum: 15 cm | Maximum: 93 cm 95% Interval: 21.875

 ${\bf cm} \ {\bf to} \ {\bf 88} \ {\bf cm}$

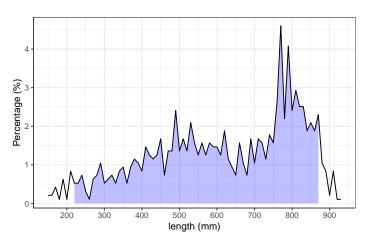


Figure 27: RACE database lengths for ROUGHTAIL SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 102

Minimum: 49 cm | Maximum: 90 cm 95% Interval: 56.05 cm to 83.475 cm

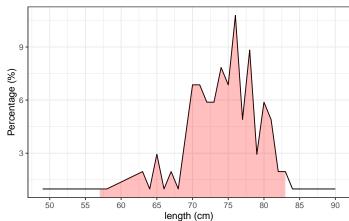


Figure 28: FMA database lengths for ROUGHTAIL SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BIG SKATE

RACE DATA

Number of Records since 2005: 1,589

Minimum: 1 cm | Maximum: 209 cm 95% Interval: 30 cm

to 179 cm

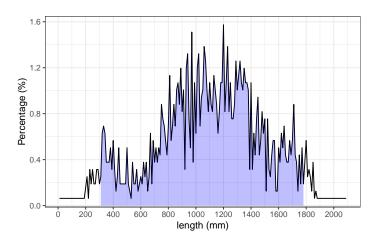


Figure 29: RACE database lengths for BIG SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 8,516

Minimum: 26 cm | Maximum: 198 cm

95% Interval: **67 cm** to **161 cm**

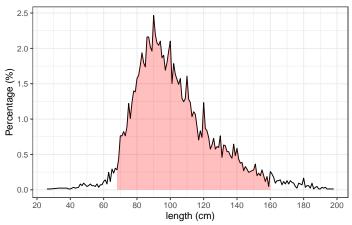


Figure 30: FMA database lengths for BIG SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: LONGNOSE SKATE

RACE DATA

Number of Records since 2005: 2,234

Minimum: 4 cm | Maximum: 162 cm 95% Interval: 37 cm

to 138 cm

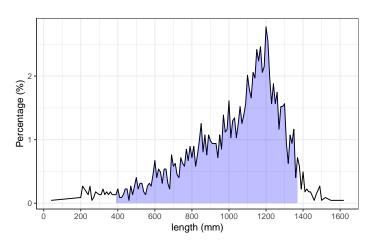


Figure 31: RACE database lengths for LONGNOSE SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 3,614

Minimum: 23 cm | Maximum: 197 cm

95% Interval: $\bf 59~cm$ to $\bf 137~cm$

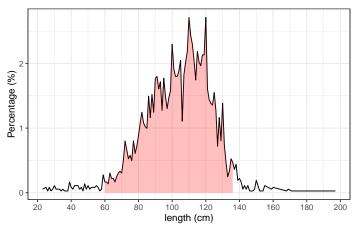


Figure 32: FMA database lengths for LONGNOSE SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BERING SKATE

RACE DATA

Number of Records since 2005: 6,736

Minimum: 3 cm | Maximum: 142 cm 95% Interval: 22 cm

to $80~\mathrm{cm}$

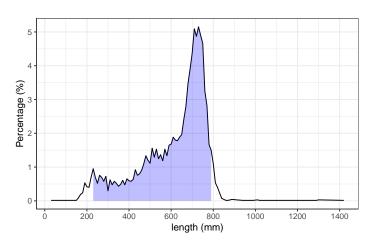


Figure 33: RACE database lengths for BERING SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 31,776

Minimum: $8 \text{ cm} \mid \text{Maximum: } 126 \text{ cm}$

95% Interval: **34 cm** to **80 cm**

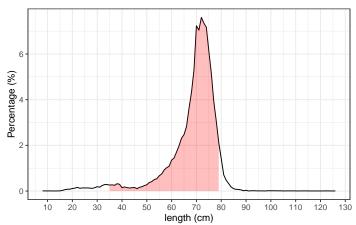


Figure 34: FMA database lengths for BERING SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PACIFIC HALIBUT

RACE DATA

Number of Records since 2005: 136,402

Minimum: 5 cm | Maximum: 198 cm 95% Interval: 22 cm

to 93~cm

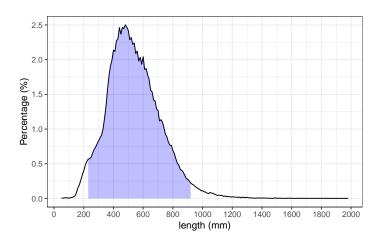


Figure 35: RACE database lengths for PACIFIC HALIBUT lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 1,086,209

Minimum: 1 cm | Maximum: 244 cm 95% Interval: 33 cm to 105 cm

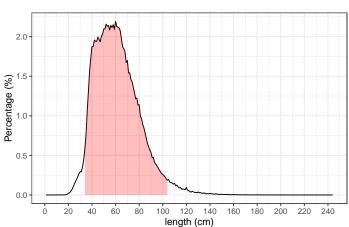


Figure 36: FMA database lengths for PACIFIC HALIBUT as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: TURBOT (GREENLAND)

RACE DATA

Number of Records since 2005: 23,622

Minimum: 6 cm | Maximum: 116 cm 95% Interval: 12 cm

to 88 cm

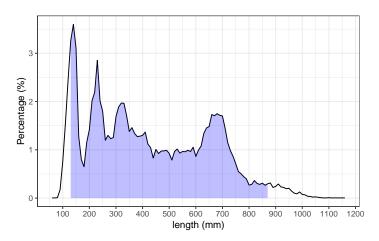


Figure 37: RACE database lengths for TURBOT (GREEN-LAND) lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 48,833

Minimum: 4 cm | Maximum: 139 cm

95% Interval: $\bf 50~cm$ to $\bf 84~cm$

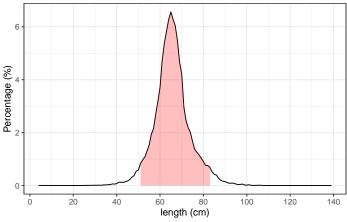


Figure 38: FMA database lengths for TURBOT (GREEN-LAND) as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: FLATHEAD SOLE

RACE DATA

Number of Records since 2005: 517,368

Minimum: 3 cm | Maximum: 71 cm 95% Interval: 13 cm

to 44 cm

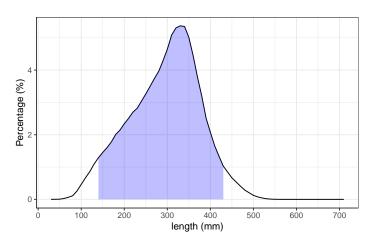


Figure 39: RACE database lengths for FLATHEAD SOLE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 209,178

Minimum: 1 cm | Maximum: 80 cm 95% Interval: 25 cm to 49 cm

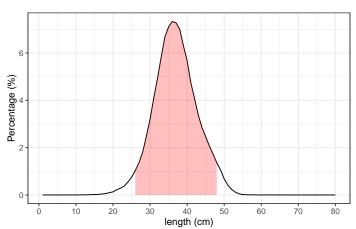


Figure 40: FMA database lengths for FLATHEAD SOLE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ROCK SOLE UNIDENTIFIED

RACE DATA

Number of Records since 2005: 65

Minimum: 16 cm | Maximum: 49 cm 95% Interval: 18.2

cm to 48.4 cm

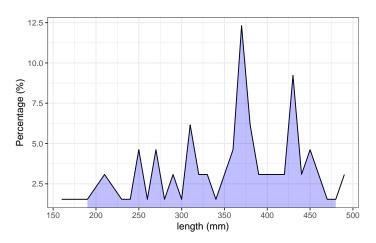


Figure 41: RACE database lengths for ROCK SOLE UNIDENTIFIED lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 1

Minimum: 30 cm | Maximum: 30 cm

95% Interval: **30 cm** to **30 cm**

`geom_line()`: Each group consists of only one observation i Do you need to adjust the group aesthetic?

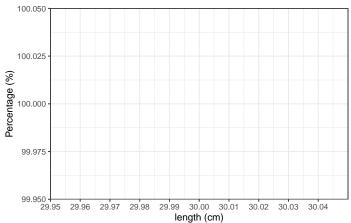


Figure 42: FMA database lengths for ROCK SOLE UNIDENTIFIED as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: REX SOLE

RACE DATA

Number of Records since 2005: 190,873

Minimum: 4 cm | Maximum: 80 cm 95% Interval: 20 cm

to 51 cm

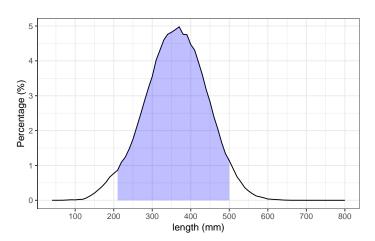


Figure 43: RACE database lengths for REX SOLE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 22,814

Minimum: 10 cm | Maximum: 79 cm

95% Interval: **31 cm** to **51 cm**

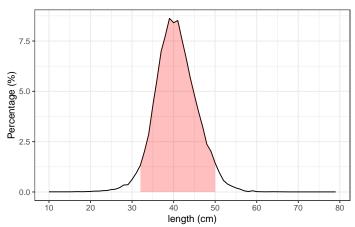


Figure 44: FMA database lengths for REX SOLE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ALASKA PLAICE

RACE DATA

Number of Records since 2005: 223,543

Minimum: 5 cm | Maximum: 72 cm 95% Interval: 15 cm

to 50 cm

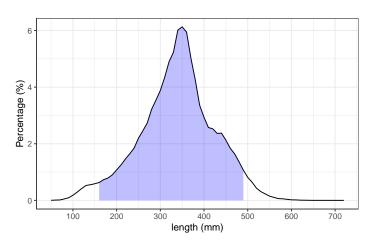


Figure 45: RACE database lengths for ALASKA PLAICE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 159,761

Minimum: 4 cm | Maximum: 70 cm 95% Interval: 22 cm to 50 cm

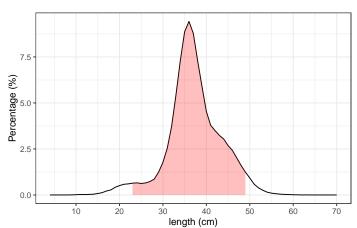


Figure 46: FMA database lengths for ALASKA PLAICE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: DOVER SOLE

RACE DATA

Number of Records since 2005: 42,395

Minimum: 7 cm | Maximum: 75 cm 95% Interval: 25 cm

to $\mathbf{56}$ \mathbf{cm}

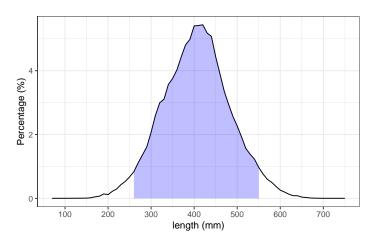


Figure 47: RACE database lengths for DOVER SOLE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 619

Minimum: 20 cm | Maximum: 67 cm

95% Interval: $\bf 33~cm$ to $\bf 56~cm$

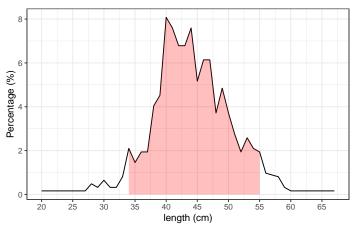


Figure 48: FMA database lengths for DOVER SOLE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BUTTER SOLE

RACE DATA

Number of Records since 2005: 19,392

Minimum: 9 cm | Maximum: 53 cm 95% Interval: 19 cm

to 41 cm

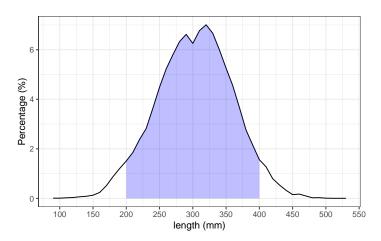


Figure 49: RACE database lengths for BUTTER SOLE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 465

Minimum: **23 cm** | Maximum: **49 cm** 95% Interval: **26 cm** to **44.4 cm**

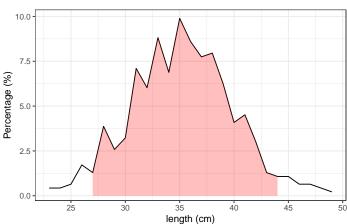


Figure 50: FMA database lengths for BUTTER SOLE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: NORTHERN ROCK SOLE

RACE DATA

Number of Records since 2005: 593,321

Minimum: 4 cm | Maximum: 71 cm 95% Interval: 12 cm

to 41 cm

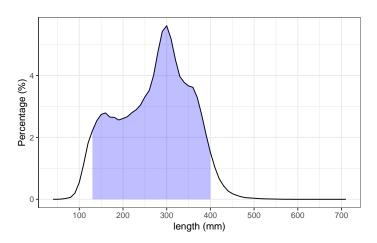


Figure 51: RACE database lengths for NORTHERN ROCK SOLE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 458,480

Minimum: 4 cm | Maximum: 93 cm 95% Interval: 23 cm to 41 cm

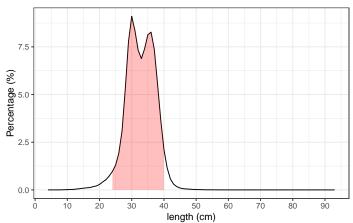


Figure 52: FMA database lengths for NORTHERN ROCK SOLE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SOUTHERN ROCK SOLE

RACE DATA

Number of Records since 2005: 97,397

Minimum: $\mathbf{5}$ cm | Maximum: $\mathbf{80}$ cm 95% Interval: $\mathbf{19}$ cm

to $\mathbf{49}$ \mathbf{cm}

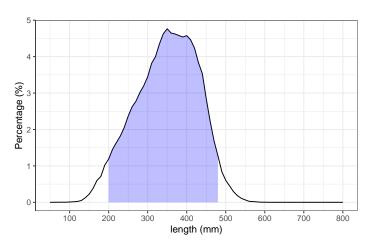


Figure 53: RACE database lengths for SOUTHERN ROCK SOLE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 9,073

Minimum: 10 cm | Maximum: 65 cm

95% Interval: **20 cm** to **51 cm**

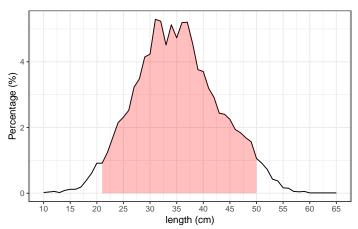


Figure 54: FMA database lengths for SOUTHERN ROCK SOLE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: YELLOWFIN SOLE

RACE DATA

Number of Records since 2005: 511,077

Minimum: $\mathbf{2}$ cm | Maximum: $\mathbf{70}$ cm 95% Interval: $\mathbf{13}$ cm

to 39 cm

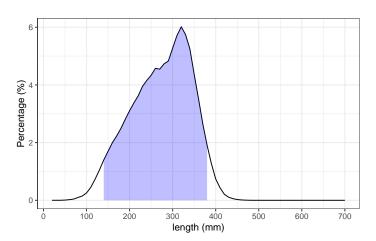


Figure 55: RACE database lengths for YELLOWFIN SOLE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: **1,546,180**

Minimum: 1 cm | Maximum: 79 cm 95% Interval: 23 cm to 39 cm

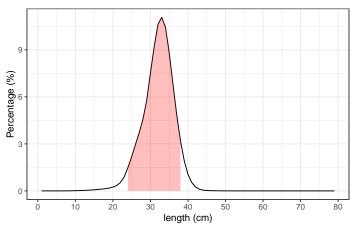


Figure 56: FMA database lengths for YELLOWFIN SOLE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ARROWTOOTH FLOUNDER

RACE DATA

Number of Records since 2005: 738,690

Minimum: 1 cm | Maximum: 107 cm 95% Interval: 18 cm

to $62~\mathrm{cm}$

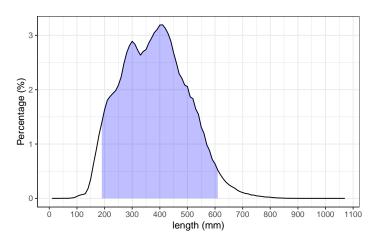


Figure 57: RACE database lengths for ARROWTOOTH FLOUNDER lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 156,190

Minimum: 6 cm | Maximum: 118 cm

95% Interval: $\mathbf{28}\ \mathbf{cm}$ to $\mathbf{66}\ \mathbf{cm}$

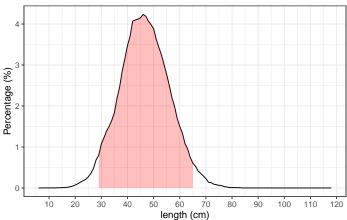


Figure 58: FMA database lengths for ARROWTOOTH FLOUNDER as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: KAMCHATKA FLOUNDER

RACE DATA

Number of Records since 2005: 83,446

Minimum: 6 cm | Maximum: 98 cm 95% Interval: 16 cm

to **68** cm

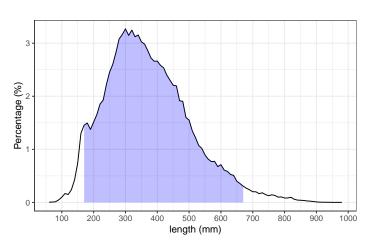


Figure 59: RACE database lengths for KAMCHATKA FLOUNDER lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 45,386

Minimum: 20 cm | Maximum: 90 cm

95% Interval: **38 cm** to **67 cm**

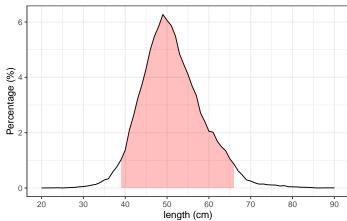


Figure 60: FMA database lengths for KAMCHATKA FLOUNDER as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SOFT SNOUT SKATE

RACE DATA

Number of Records since 2005: 14

Minimum: 24 cm | Maximum: 125 cm 95% Interval:

36.025 cm to 122.725 cm

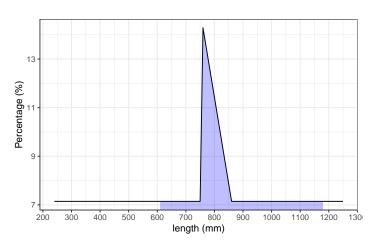


Figure 61: RACE database lengths for SOFT SNOUT SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 1

Minimum: 93 cm | Maximum: 93 cm

95% Interval: **93 cm** to **93 cm**

`geom_line()`: Each group consists of only one observation i Do you need to adjust the group aesthetic?

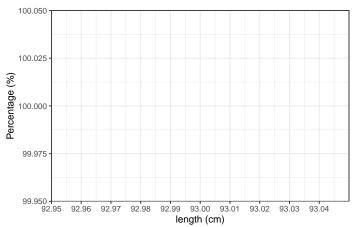


Figure 62: FMA database lengths for SOFT SNOUT SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: WHITEBROW SKATE

RACE DATA

Number of Records since 2005: 1,071

Minimum: 14 cm | Maximum: 91 cm 95% Interval: 19 cm

to 81 cm

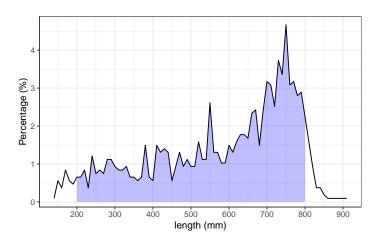


Figure 63: RACE database lengths for WHITEBROW SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 346

Minimum: 27 cm | Maximum: 120 cm 95% Interval: 48 cm to 100.375 cm

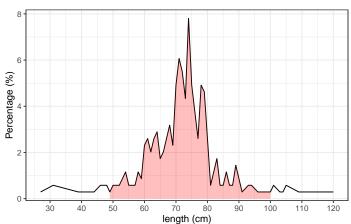


Figure 64: FMA database lengths for WHITEBROW SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: COMMANDER SKATE

RACE DATA

Number of Records since 2005: 2,088

Minimum: $\mathbf{15}$ cm | Maximum: $\mathbf{115}$ cm 95% Interval: $\mathbf{22}$

 ${\bf cm}$ to ${\bf 93}$ ${\bf cm}$

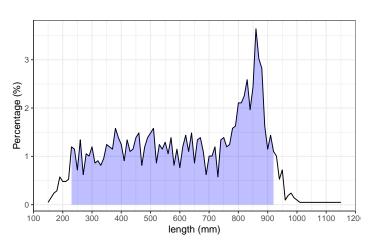


Figure 65: RACE database lengths for COMMANDER SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 2,424

Minimum: 23 cm | Maximum: 122 cm

95% Interval: **36 cm** to **95 cm**

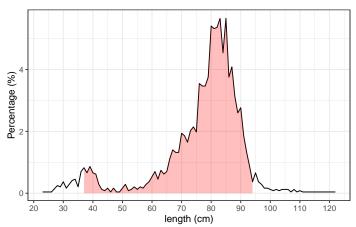


Figure 66: FMA database lengths for COMMANDER SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: WHITEBLOTCHED SKATE

RACE DATA

Number of Records since 2005: 5,434

Minimum: 8 cm | Maximum: 171 cm 95% Interval: 24 cm

to 120 cm

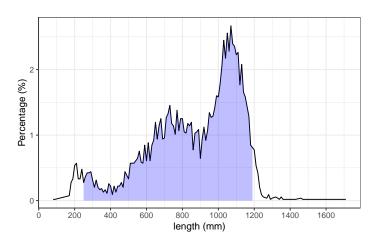


Figure 67: RACE database lengths for WHITEBLOTCHED SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 10,466

Minimum: 6 cm | Maximum: 160 cm

95% Interval: **25 cm** to **118 cm**

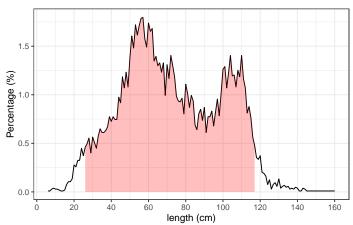


Figure 68: FMA database lengths for WHITEBLOTCHED SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: MUD SKATE

RACE DATA

Number of Records since 2005: 2,315

Minimum: 14 cm | Maximum: 99 cm 95% Interval: 24.85

 ${\bf cm} \ {\bf to} \ {\bf 70} \ {\bf cm}$

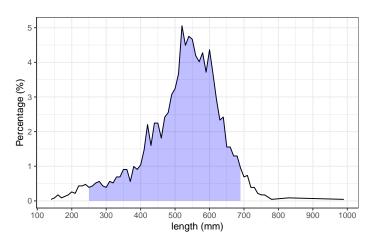


Figure 69: RACE database lengths for MUD SKATE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 3,860

Minimum: 6 cm | Maximum: 93 cm

95% Interval: $\bf 19~cm$ to $\bf 74~cm$

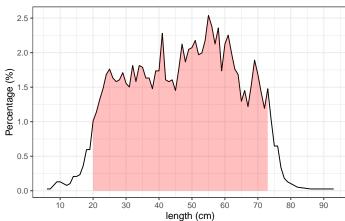


Figure 70: FMA database lengths for MUD SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: STIFF SNOUT SKATE

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 1

Minimum: 118 cm | Maximum: 118 cm

95% Interval: $\bf 118~cm$ to $\bf 118~cm$

`geom_line()`: Each group consists of only one observation i Do you need to adjust the group aesthetic?

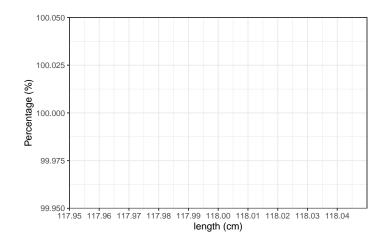


Figure 71: FMA database lengths for STIFF SNOUT SKATE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PACIFIC MACKEREL

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: **3,150** Minimum: **17 cm** | Maximum: **55 cm** 95% Interval: **26 cm** to **38 cm**

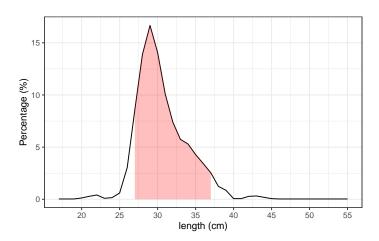


Figure 72: FMA database lengths for PACIFIC MACKEREL as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: POLLOCK

RACE DATA

Number of Records since 2005: 948,516

Minimum: 2 cm | Maximum: 99 cm 95% Interval: 12 cm

to $65~\mathrm{cm}$

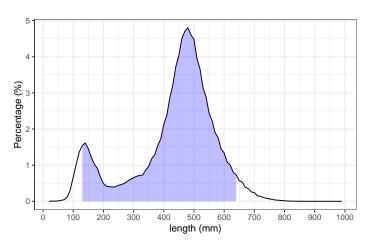


Figure 73: RACE database lengths for POLLOCK lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: **3,251,521**

Minimum: 1 cm | Maximum: 98 cm 95% Interval: 32 cm to 57 cm

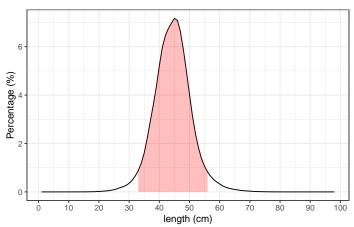


Figure 74: FMA database lengths for POLLOCK as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PACIFIC COD

RACE DATA

Number of Records since 2005: 388,070

Minimum: 4 cm | Maximum: 116 cm 95% Interval: 14 cm

to 81 cm

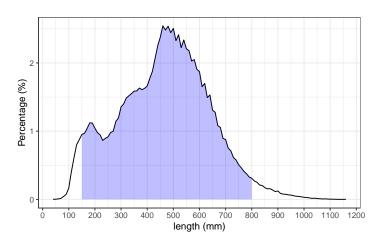


Figure 75: RACE database lengths for PACIFIC COD lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: **1,649,512**

Minimum: $\mathbf{5}$ \mathbf{cm} | Maximum: $\mathbf{130}$ \mathbf{cm}

95% Interval: **45 cm** to **89 cm**

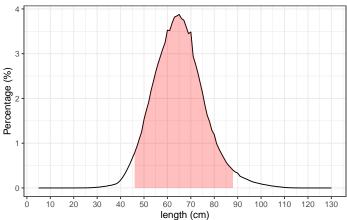


Figure 76: FMA database lengths for PACIFIC COD as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SABLEFISH (BLACKCOD)

RACE DATA

Number of Records since 2005: 58,301

Minimum: 6 cm | Maximum: 108 cm 95% Interval: 34 cm

to **77 cm**

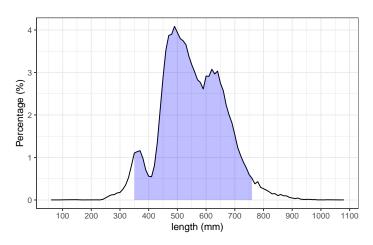


Figure 77: RACE database lengths for SABLEFISH (BLACKCOD) lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 255,030

Minimum: 3 cm | Maximum: 123 cm

95% Interval: $\bf 45~cm$ to $\bf 86~cm$

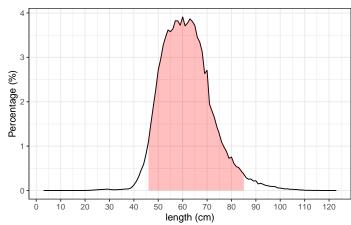


Figure 78: FMA database lengths for SABLEFISH (BLACK-COD) as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ATKA MACKEREL

RACE DATA

Number of Records since 2005: 68,652

Minimum: 9 cm | Maximum: 63 cm 95% Interval: 24 cm

to $48~\mathrm{cm}$

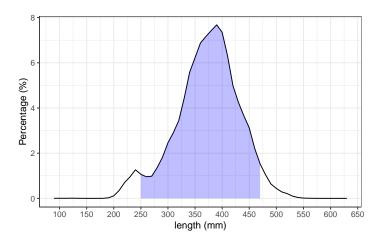


Figure 79: RACE database lengths for ATKA MACKEREL lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 405,658

Minimum: 3 cm | Maximum: 75 cm 95% Interval: 30 cm to 45 cm

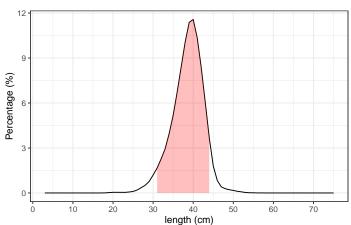


Figure 80: FMA database lengths for ATKA MACKEREL as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PACIFIC HAKE

RACE DATA

Number of Records since 2005: 6,553

Minimum: 10 cm | Maximum: 92 cm 95% Interval: 27 cm

to 64.199999999998 cm

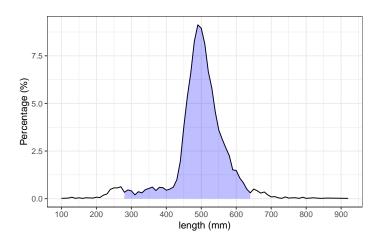


Figure 81: RACE database lengths for PACIFIC HAKE lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 407,740

Minimum: 7 cm | Maximum: 76 cm 95% Interval: 32 cm to 50 cm

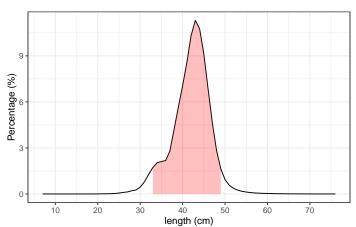


Figure 82: FMA database lengths for PACIFIC HAKE as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: JACK MACKEREL

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 9,937 Minimum: 19 cm | Maximum: 57 cm 95% Interval: 27 cm to 51 cm

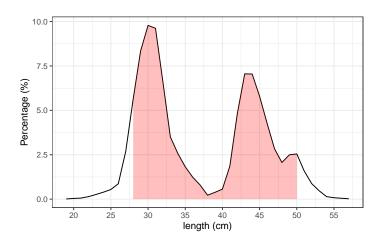


Figure 83: FMA database lengths for JACK MACKEREL as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SALMON UNIDENTIFIED

RACE DATA

Number of Records since 2005: 1

Minimum: $\mathbf{15}$ cm | Maximum: $\mathbf{15}$ cm 95% Interval: $\mathbf{15}$ cm

to **15** cm

`geom_line()`: Each group consists of only one observe i Do you need to adjust the group aesthetic?

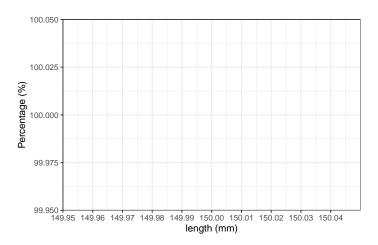


Figure 84: RACE database lengths for SALMON UNIDENTIFIED lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 16

Minimum: 23 cm | Maximum: 64 cm 95% Interval: 23.375 cm to 63.25 cm

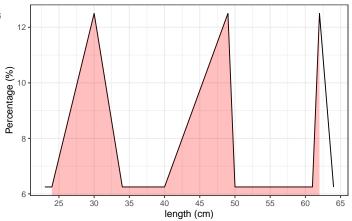


Figure 85: FMA database lengths for SALMON UNIDENTIFIED as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: CHUM SALMON

RACE DATA

Number of Records since 2005: 1,628

Minimum: 7 cm | Maximum: 80 cm 95% Interval: 36 cm

to **72 cm**

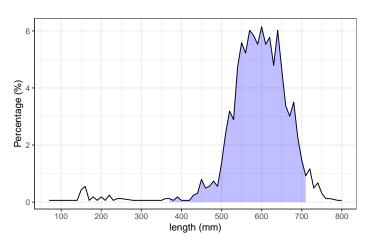


Figure 86: RACE database lengths for CHUM SALMON lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 109,618

Minimum: 1 cm | Maximum: 104 cm

95% Interval: 43 cm to 68 cm

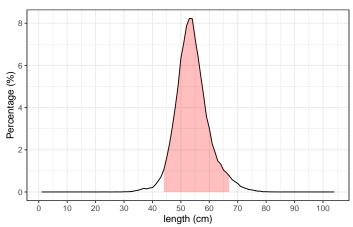


Figure 87: FMA database lengths for CHUM SALMON as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: CHINOOK SALMON

RACE DATA

Number of Records since 2005: 654

Minimum: 16 cm | Maximum: 105 cm 95% Interval: 21.65

 ${\bf cm}$ to ${\bf 75}$ ${\bf cm}$

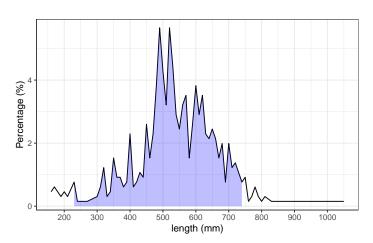


Figure 88: RACE database lengths for CHINOOK SALMON lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 63,681

Minimum: $17 \text{ cm} \mid \text{Maximum: } 104 \text{ cm}$

95% Interval: **39 cm** to **76 cm**

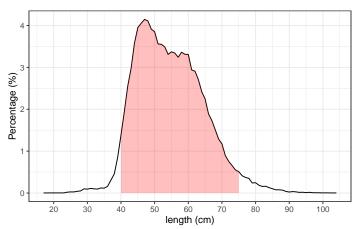


Figure 89: FMA database lengths for CHINOOK SALMON as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: COHO SALMON

RACE DATA

Number of Records since 2005: 96

Minimum: 14 cm | Maximum: 78 cm 95% Interval: 17.75

cm to 73 cm

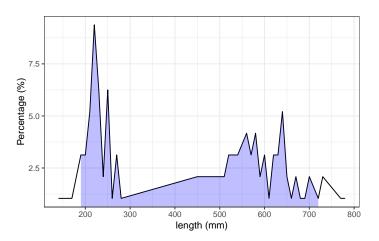


Figure 90: RACE database lengths for COHO SALMON lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 915

Minimum: 19 cm | Maximum: 80 cm

95% Interval: $\bf 28~cm$ to $\bf 72~cm$

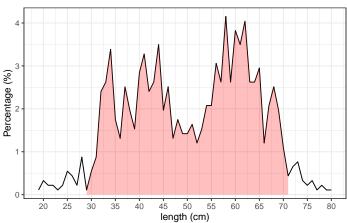


Figure 91: FMA database lengths for COHO SALMON as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SOCKEYE SALMON

RACE DATA

Number of Records since 2005: 27

Minimum: 23 cm | Maximum: 63 cm 95% Interval: 23.65

 ${\bf cm}$ to ${\bf 61.7}$ ${\bf cm}$

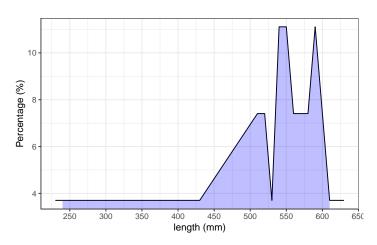


Figure 92: RACE database lengths for SOCKEYE SALMON lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 860

Minimum: 21 cm | Maximum: 75 cm

95% Interval: **27 cm** to **61 cm**

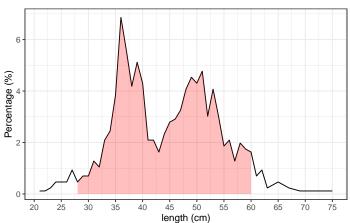


Figure 93: FMA database lengths for SOCKEYE SALMON as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PINK SALMON

RACE DATA

Number of Records since 2005: 175

Minimum: 12 cm | Maximum: 57 cm 95% Interval: 21 cm

to 54 cm

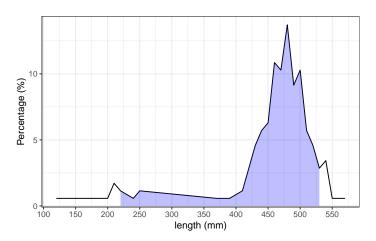


Figure 94: RACE database lengths for PINK SALMON lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 4,610

Minimum: 18 cm | Maximum: 69 cm

95% Interval: **27 cm** to **55 cm**

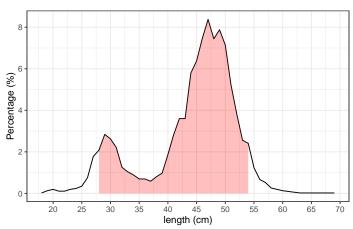


Figure 95: FMA database lengths for PINK SALMON as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: STURGEON UNIDENTIFIED

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 2

Minimum: 130 cm | Maximum: 143 cm 95% Interval: 130.325 cm to 142.675 cm

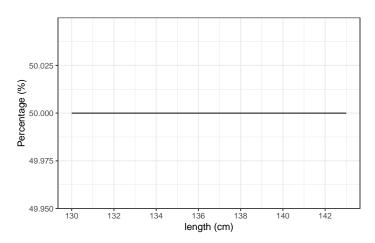


Figure 96: FMA database lengths for STURGEON UNIDENTIFIED as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: GREEN STURGEON

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 4

Minimum: 125 cm | Maximum: 158 cm 95% Interval: 125.3 cm to 155.975 cm

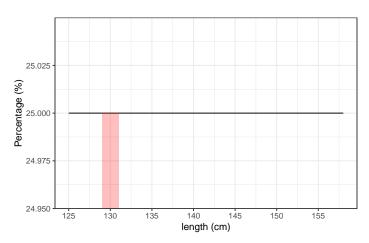


Figure 97: FMA database lengths for GREEN STURGEON as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PACIFIC OCEAN PERCH

RACE DATA

Number of Records since 2005: 423,231

Minimum: 4 cm | Maximum: 99 cm 95% Interval: 19 cm

to 44 cm

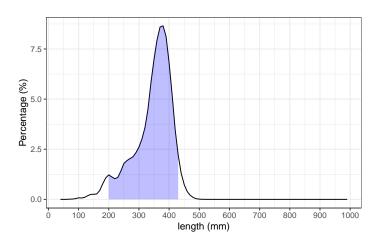


Figure 98: RACE database lengths for PACIFIC OCEAN PERCH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 419,913

Minimum: 3 cm | Maximum: 66 cm

95% Interval: **27 cm** to **44 cm**

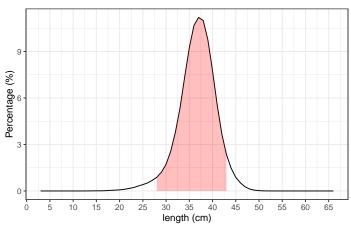


Figure 99: FMA database lengths for PACIFIC OCEAN PERCH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BOCACCIO ROCKFISH

RACE DATA

Number of Records since 2005: 14

Minimum: 42 cm | Maximum: 80 cm 95% Interval: 42 cm

to 79.675 cm

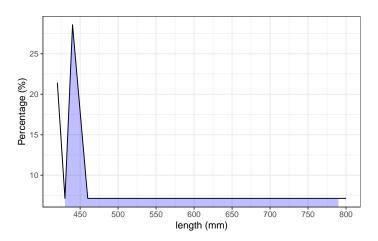


Figure 100: RACE database lengths for BOCACCIO ROCK-FISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 3,654

Minimum: 27 cm | Maximum: 86 cm

95% Interval: **36 cm** to **70 cm**

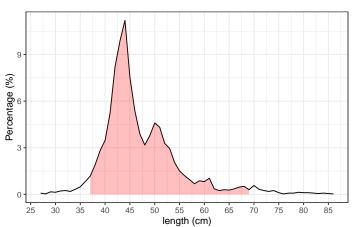


Figure 101: FMA database lengths for BOCACCIO ROCK-FISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: NORTHERN ROCKFISH

RACE DATA

Number of Records since 2005: 114,132

Minimum: 4 cm | Maximum: 76 cm 95% Interval: 25 cm

to $43~\mathrm{cm}$

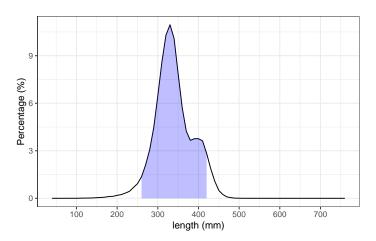


Figure 102: RACE database lengths for NORTHERN ROCK-FISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 98,607

Minimum: 14 cm | Maximum: 97 cm

95% Interval: **28 cm** to **44 cm**

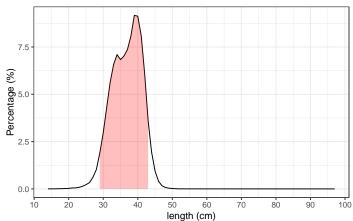


Figure 103: FMA database lengths for NORTHERN ROCK-FISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: WIDOW ROCKFISH

RACE DATA

Number of Records since 2005: 68

Minimum: 31 cm | Maximum: 63 cm 95% Interval: 33.35

 ${\bf cm} \ {\bf to} \ {\bf 60} \ {\bf cm}$

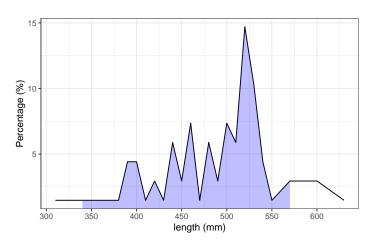


Figure 104: RACE database lengths for WIDOW ROCK-FISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 37,595

Minimum: 23 cm | Maximum: 60 cm

95% Interval: **33 cm** to **50 cm**

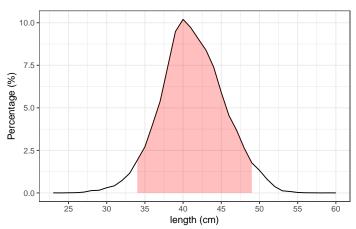


Figure 105: FMA database lengths for WIDOW ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: ROUGHEYE ROCKFISH

RACE DATA

Number of Records since 2005: 13,774

Minimum: 4 cm | Maximum: 80 cm 95% Interval: 15 cm

to 54 cm

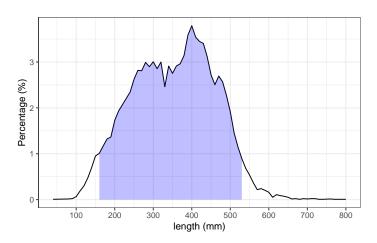


Figure 106: RACE database lengths for ROUGHEYE ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 55,559

Minimum: 11 cm | Maximum: 102 cm

95% Interval: **26 cm** to **65 cm**

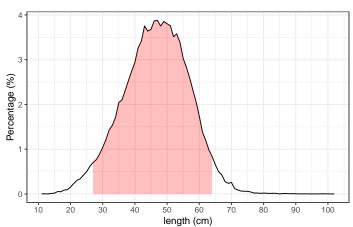


Figure 107: FMA database lengths for ROUGHEYE ROCK-FISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: DARK BLOTCHED ROCKFISH

RACE DATA

Number of Records since 2005: **321**

Minimum: 15 cm | Maximum: 52 cm 95% Interval: 20 cm

to 49 cm

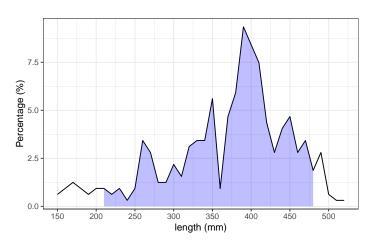


Figure 108: RACE database lengths for DARK BLOTCHED ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 33,589

Minimum: 18 cm | Maximum: 62 cm

95% Interval: **27 cm** to **45 cm**

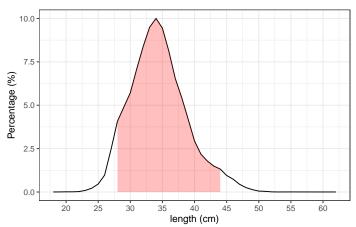


Figure 109: FMA database lengths for DARK BLOTCHED ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: CANARY ROCKFISH

RACE DATA

Number of Records since 2005: 1,396

Minimum: 22 cm | Maximum: 64 cm 95% Interval: 34 cm

to 59 cm

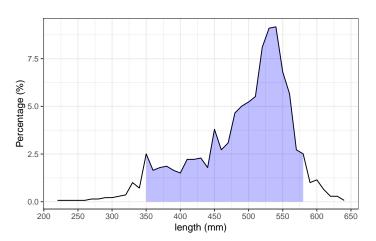


Figure 110: RACE database lengths for CANARY ROCK-FISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 3,656

Minimum: 29 cm | Maximum: 69 cm

95% Interval: **38 cm** to **57 cm**

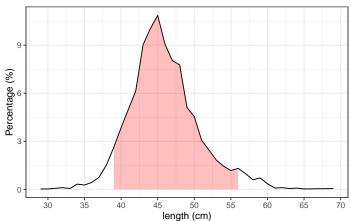


Figure 111: FMA database lengths for CANARY ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SHORTBELLY ROCKFISH

RACE DATA

This species does not have lengths in the database

FMA DATA

Number of Records since 2013: 1,050 Minimum: 15 cm | Maximum: 35 cm

95% Interval: **23 cm** to **28 cm**

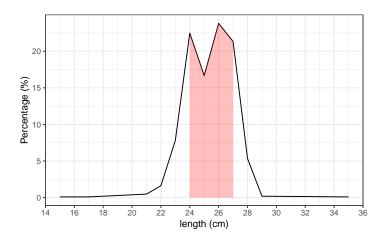


Figure 112: FMA database lengths for SHORTBELLY ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: YELLOWTAIL ROCKFISH

RACE DATA

Number of Records since 2005: 512

Minimum: 15 cm | Maximum: 62 cm 95% Interval: 40.775

 ${\bf cm} \ {\bf to} \ {\bf 56} \ {\bf cm}$

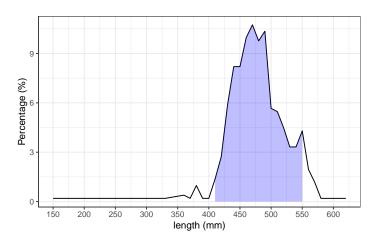


Figure 113: RACE database lengths for YELLOWTAIL ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 26,799

Minimum: 16 cm | Maximum: 61 cm

95% Interval: **38 cm** to **53 cm**

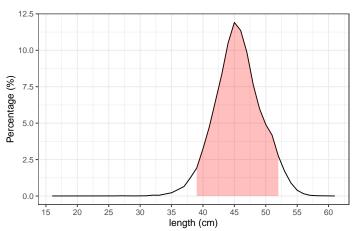


Figure 114: FMA database lengths for YELLOWTAIL ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: YELLOWEYE ROCKFISH

RACE DATA

Number of Records since 2005: 417

Minimum: 18 cm | Maximum: 79 cm 95% Interval: 25.4

 ${\bf cm}$ to ${\bf 75}$ ${\bf cm}$

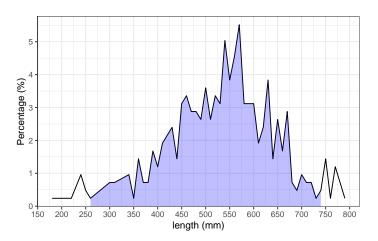


Figure 115: RACE database lengths for YELLOWEYE ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 1

Minimum: 48 cm | Maximum: 48 cm

95% Interval: **48 cm** to **48 cm**

`geom_line()`: Each group consists of only one observation i Do you need to adjust the group aesthetic?

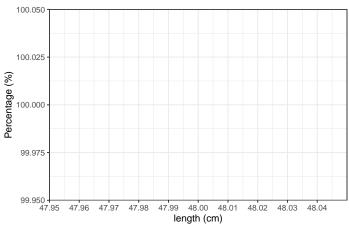


Figure 116: FMA database lengths for YELLOWEYE ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SHORTRAKER ROCKFISH

RACE DATA

Number of Records since 2005: 15,153

Minimum: 10 cm | Maximum: 109 cm 95% Interval: 29

 ${\bf cm} \ {\bf to} \ {\bf 84} \ {\bf cm}$

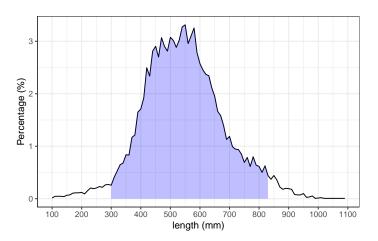


Figure 117: RACE database lengths for SHORTRAKER ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 18,386

Minimum: 7 cm | Maximum: 112 cm

95% Interval: $\bf 35~cm$ to $\bf 84~cm$

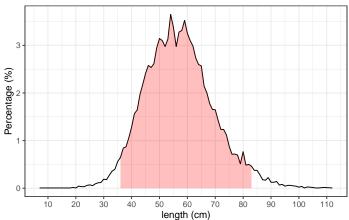


Figure 118: FMA database lengths for SHORTRAKER ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: DUSKY ROCKFISH

RACE DATA

Number of Records since 2005: 20,779

Minimum: 12 cm | Maximum: 57 cm 95% Interval: 30 cm

to 51 cm

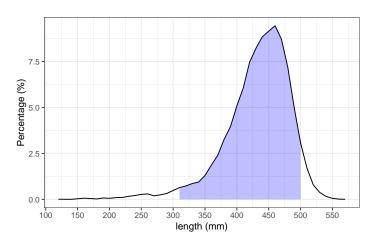


Figure 119: RACE database lengths for DUSKY ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 72,105

Minimum: 16 cm | Maximum: 69 cm

95% Interval: **36 cm** to **51 cm**

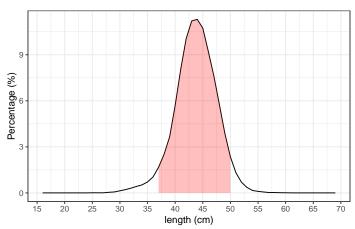


Figure 120: FMA database lengths for DUSKY ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: DARK ROCKFISH

RACE DATA

Number of Records since 2005: 1,779

Minimum: 21 cm | Maximum: 53 cm 95% Interval: 32 cm

to 47 cm

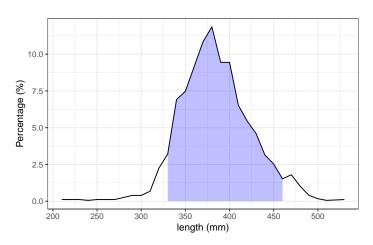


Figure 121: RACE database lengths for DARK ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 815

Minimum: 25 cm | Maximum: 56 cm

95% Interval: **32 cm** to **46 cm**

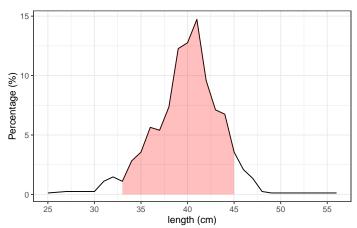


Figure 122: FMA database lengths for DARK ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: SHORTSPINE THORNYHEAD

RACE DATA

Number of Records since 2005: 174,387

Minimum: 4 cm | Maximum: 78 cm 95% Interval: 15 cm

to **47 cm**

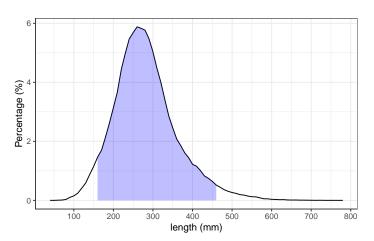


Figure 123: RACE database lengths for SHORTSPINE THORNYHEAD lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 35,879

Minimum: **3 cm** | Maximum: **84 cm** 95% Interval: **20 cm** to **60 cm**

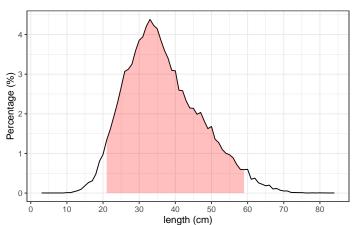


Figure 124: FMA database lengths for SHORTSPINE THORNYHEAD as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: LONGSPINE THORNYHEAD ROCKFISH

RACE DATA

Number of Records since 2005: 5,591

Minimum: 6 cm | Maximum: 61 cm 95% Interval: 11 cm to 30 cm

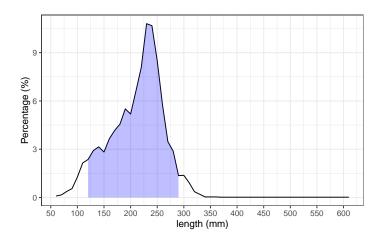


Figure 125: RACE database lengths for LONGSPINE THORNYHEAD ROCKFISH lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 29

Minimum: **19 cm** | Maximum: **43 cm** 95% Interval: **20.4 cm** to **40.2 cm**

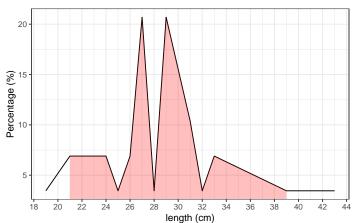


Figure 126: FMA database lengths for LONGSPINE THORNYHEAD ROCKFISH as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: WARTY SCULPIN

RACE DATA

Number of Records since 2005: 10,244

Minimum: 2 cm | Maximum: 63 cm 95% Interval: 7 cm to

 $52~\mathrm{cm}$

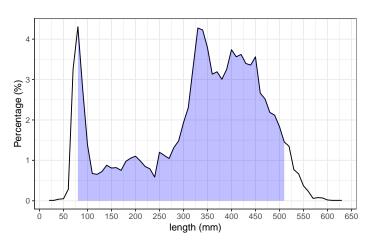


Figure 127: RACE database lengths for WARTY SCULPIN lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 368

Minimum: 23 cm | Maximum: 59 cm

95% Interval: $\bf 30~cm$ to $\bf 54~cm$

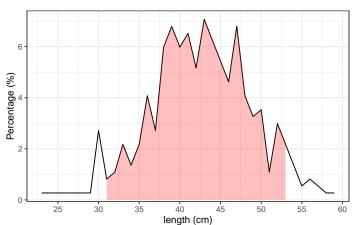


Figure 128: FMA database lengths for WARTY SCULPIN as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: PLAIN SCULPIN

RACE DATA

Number of Records since 2005: 47,175

Minimum: 6 cm | Maximum: 94 cm 95% Interval: 13 cm

to **52** cm

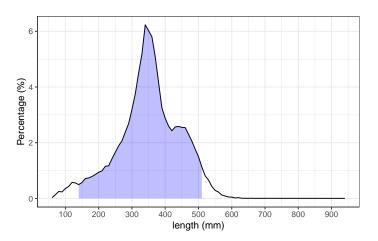


Figure 129: RACE database lengths for PLAIN SCULPIN lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 63,997

Minimum: 6 cm | Maximum: 73 cm 95% Interval: 25 cm to 52 cm

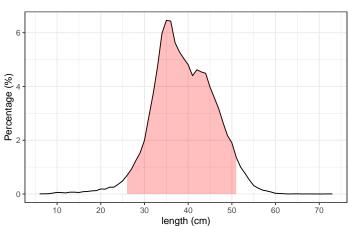


Figure 130: FMA database lengths for PLAIN SCULPIN as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: BIGMOUTH SCULPIN

RACE DATA

Number of Records since 2005: 5,333

Minimum: 5 cm | Maximum: 86 cm 95% Interval: 22 cm

to 73 cm

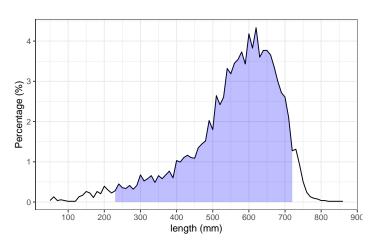


Figure 131: RACE database lengths for BIGMOUTH SCULPIN lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 23

Minimum: **21 cm** | Maximum: **74 cm** 95% Interval: **23.75 cm** to **71.8 cm**

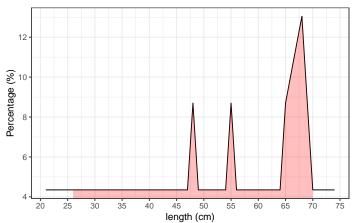


Figure 132: FMA database lengths for BIGMOUTH SCULPIN as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: GREAT SCULPIN

RACE DATA

Number of Records since 2005: 14,724

Minimum: 5 cm | Maximum: 94 cm 95% Interval: 25 cm

to 73 cm

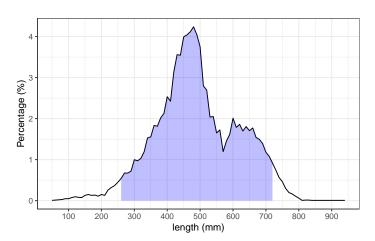


Figure 133: RACE database lengths for GREAT SCULPIN lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 29,149

Minimum: 7 cm | Maximum: 97 cm

95% Interval: **33 cm** to **72 cm**

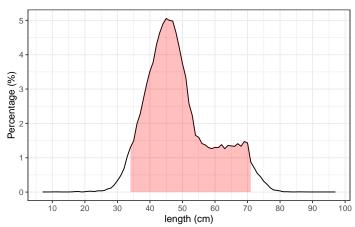


Figure 134: FMA database lengths for GREAT SCULPIN as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: YELLOW IRISH LORD

RACE DATA

Number of Records since 2005: 43,324

Minimum: 4 cm | Maximum: 60 cm 95% Interval: 22 cm

to **47 cm**

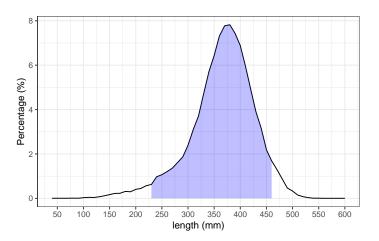


Figure 135: RACE database lengths for YELLOW IRISH LORD lengths as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

FMA DATA

Number of Records since 2013: 2,565

 $\label{eq:minimum: 9 cm | Maximum: 56 cm} \mbox{Minimum: 9 cm | Maximum: 56 cm}$

95% Interval: $\mathbf{24}\ \mathbf{cm}$ to $\mathbf{46}\ \mathbf{cm}$

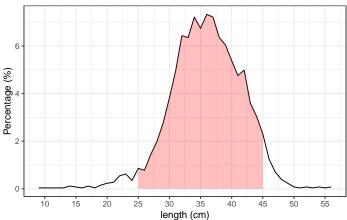


Figure 136: FMA database lengths for YELLOW IRISH LORD as a percentage of recorded individuals. The shaded area is within the 95th percent confidence interval.

species: HUMBOLDT SQUID

RACE DATA FMA DATA

This species does not have lengths in the database

This species does not have lengths in the database