



The Southeast Reef Fish Survey

2016 Update
Sampling Activities and Relative Abundance Indices



Southeast Reef Fish Survey (SERFS)

MARMAP + SEAMAP-SA + SEFIS

R/V *Palmetto*



R/V *Savannah*



NOAA Vessel *Pisces*



Marine Resources Monitoring, Assessment & Prediction Program
Southeast Area Monitoring & Assessment Program (South Atlantic)
Southeast Fishery Independent Survey

Primary Fishing Gears

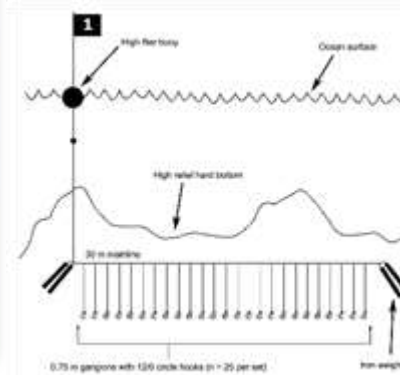
Chevron Trap



Long Bottom Longline



Short Bottom Longline



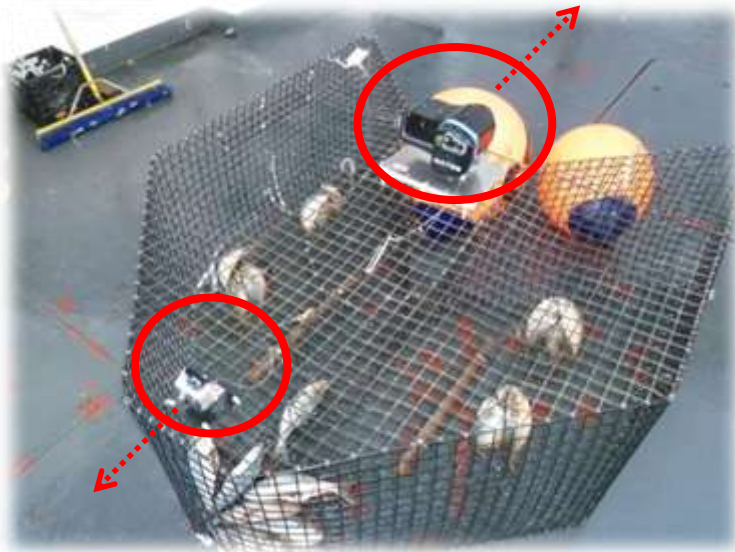
Chevron Trap

Consistent and standardized use since 1990

Deployed in depths to ≈ 110 m

Soak time ≈ 90 minutes, baited with clupeids

1-3 video cameras on each trap

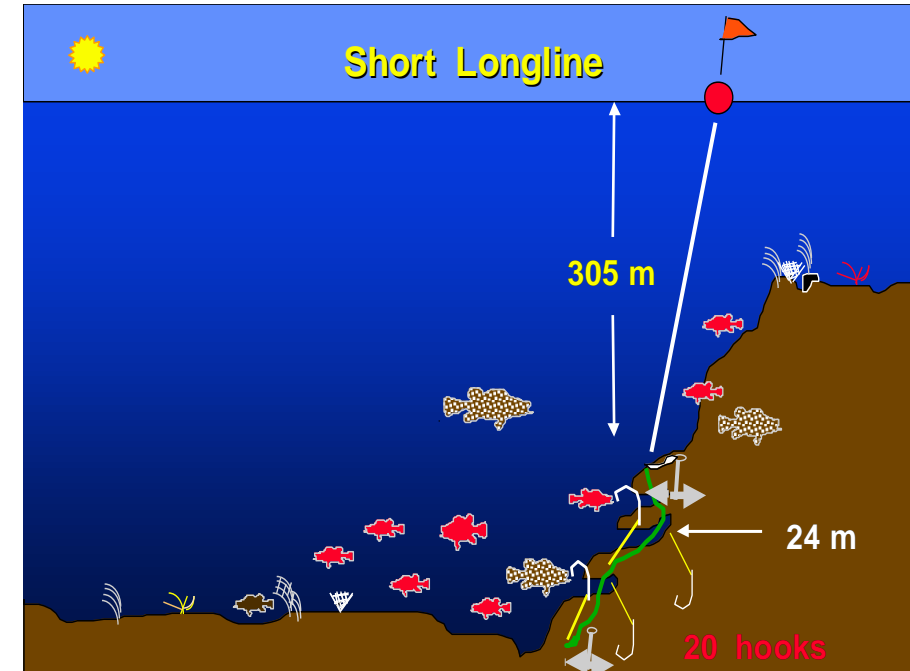
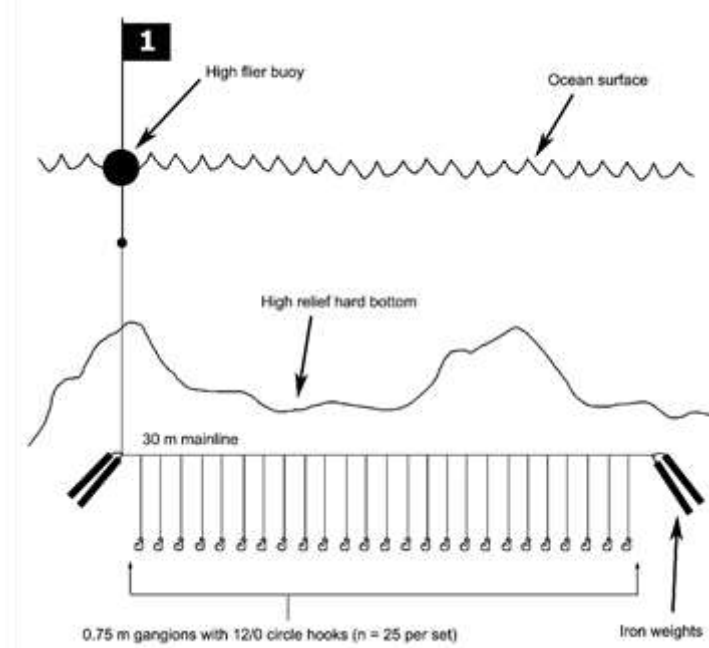


Short Bottom Longline

Target Species

Snowy grouper, jacks, tilefish, speckled hind

Soak time \approx 90 minutes, baited with whole squid



Long Bottom Longline

Deployed in depths of $\approx 170 - 270$ m (550 – 900 ft)
on mud bottom habitat $\approx 60 - 80$ nm offshore

Soak time ≈ 90 minutes, baited with whole squid

Common species: Golden Tilefish



Sampling Stations

Chevron Trap

≈4,000 sampling stations

1,500 – 2,000 stations randomly selected

Short Bottom Longline

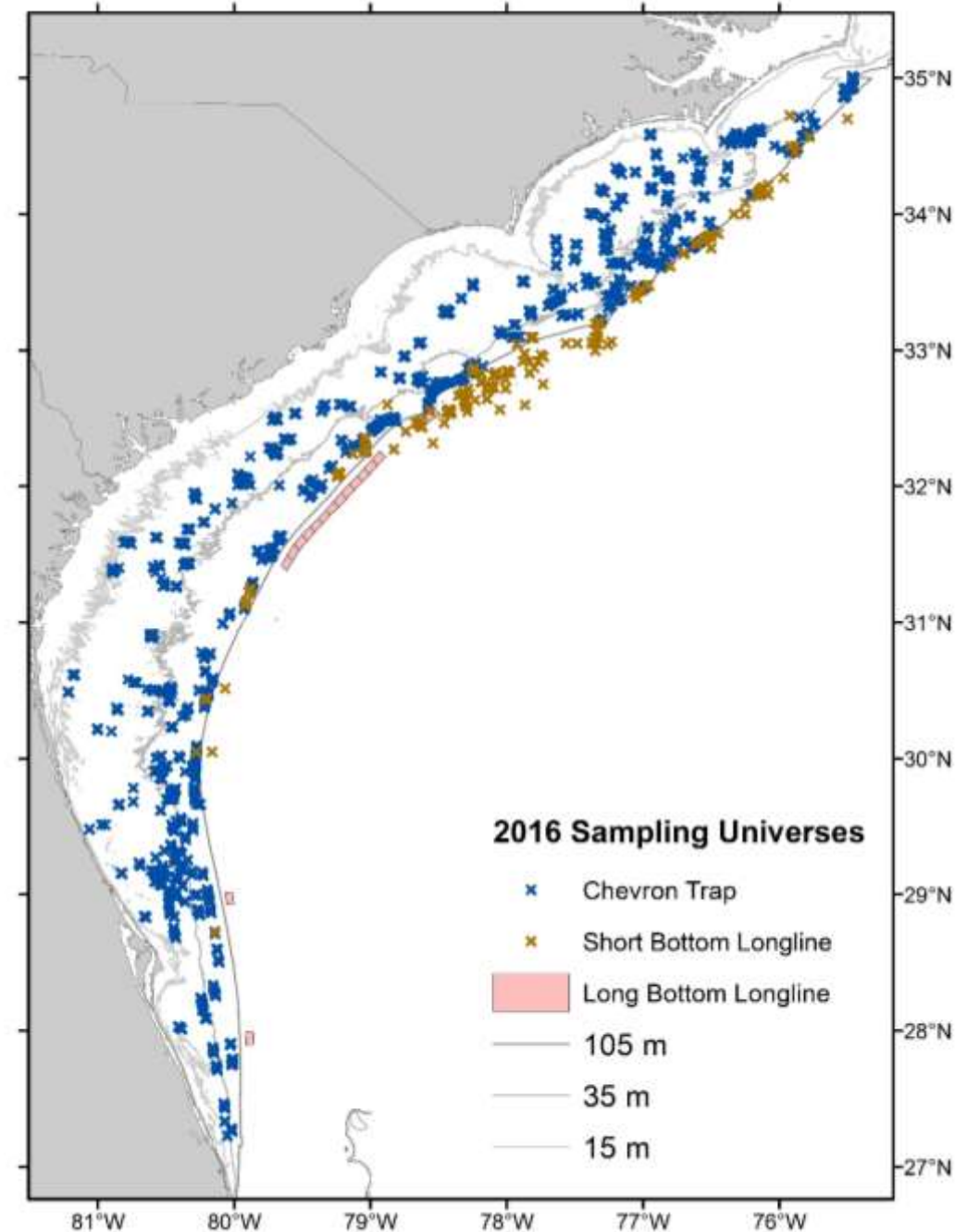
≈ 300 sampling stations

100 – 150 randomly selected and sampled annually

Long Bottom Longline Blocks

15 blocks in “tilefish” habitat

Target min. 2 LBLL/block each year



Sampling Design

Processing and Data Analysis

MARMAP/SEAMAP-SA:

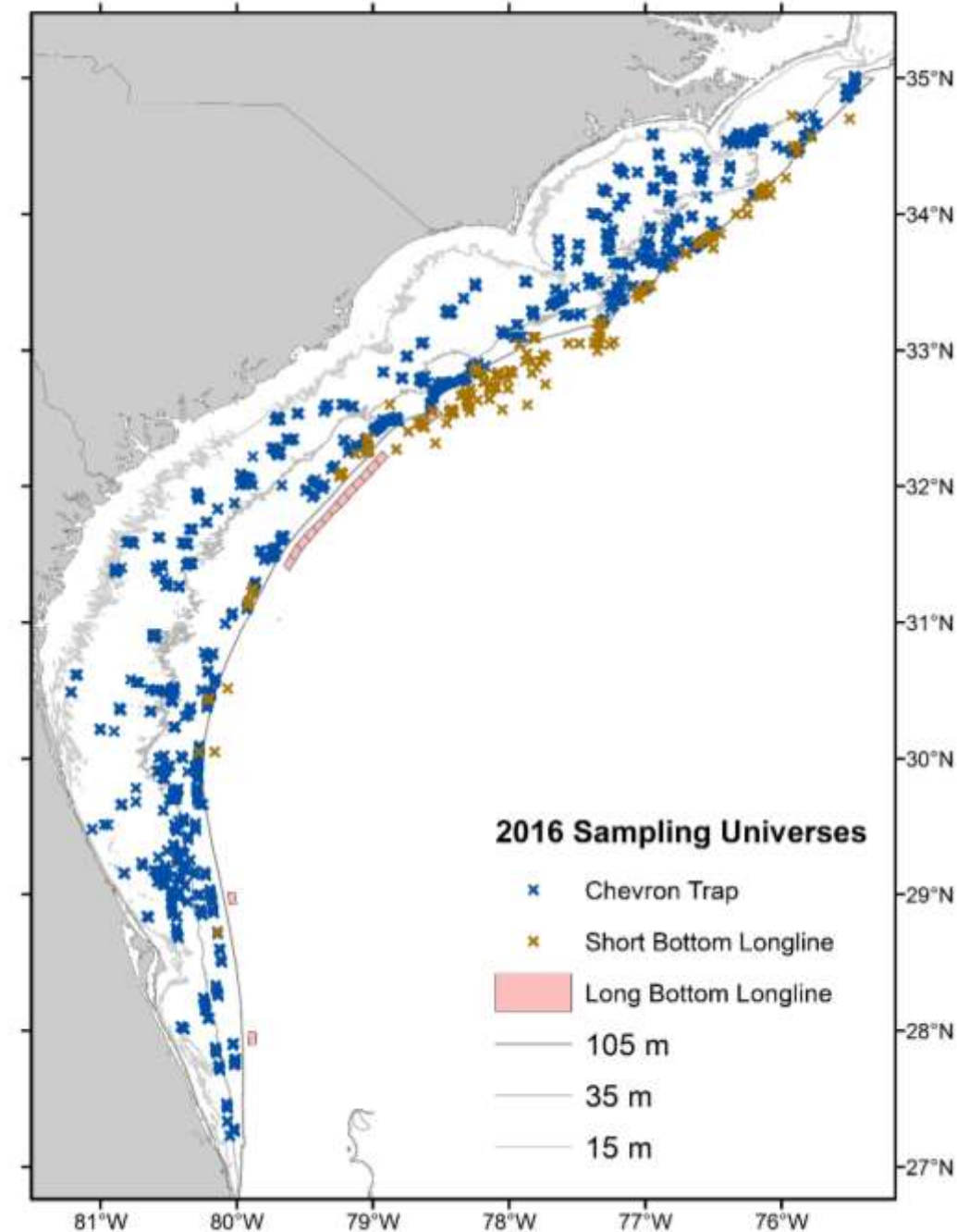
Trap and longline indices

Life history processing & analyses

SEFIS

Video processing & analyses

Data – one combined database



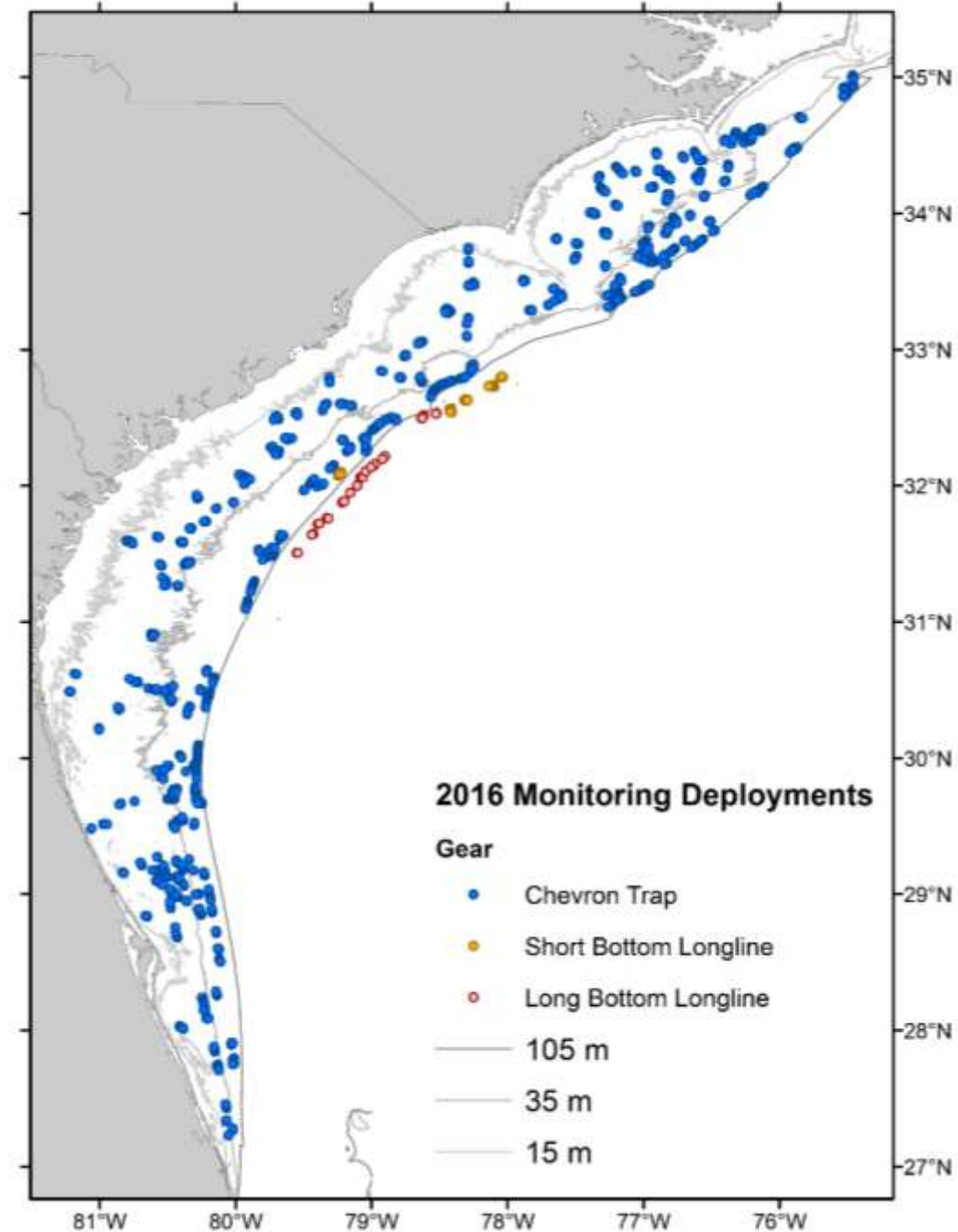
2016 Summary

1,537 Chevron Traps

78 Short Bottom Longlines

31 Long Bottom Longlines

431 Other Gears (e.g. CTD and Rod-&-Reel)





2016 Reef Fish Survey Results

2016 Top 16 Species

Scientific Name	Common Name	Chevron	Short Bottom Longline	Rod-&-Reel	Total
<i>Haemulon aurolineatum</i>	Tomtate	18,559		0	18,559
<i>Centropristis striata</i>	Black Sea Bass	7,989		47	8,036
<i>Rhomboplites aurorubens</i>	Vermilion Snapper	4,555		0	4,555
<i>Stenotomus</i> spp.	Scup & Longspine Porgy	2,945		0	2,945
<i>Balistes capriscus</i>	Gray Triggerfish	2,589		0	2,589
<i>Pagrus pagrus</i>	Red Porgy	1,917	7	0	1,924
<i>Haemulon plumierii</i>	White Grunt	1,275		25	1,300
<i>Lutjanus campechanus</i>	Red Snapper	1,098		16	1,114
<i>Centropristis ocyurus</i>	Bank Sea Bass	734		0	734
<i>Diplectrum formosum</i>	Sand Perch	452		0	452
<i>Diplodus holbrookii</i>	Spottail Pinfish	429		0	429
<i>Calamus nodosus</i>	Knobbed Porgy	137		1	138
<i>Hyporthodus niveatus</i>	Snowy Grouper	27	82	1	110
<i>Seriola rivoliana</i>	Almaco Jack	73	14	0	87
<i>Stephanolepis hispidus</i>	Planehead Filefish	73		0	73
<i>Mycteroperca phenax</i>	Scamp	53	4	4	61

Overview of CPUE

Chevron trap (1990-2016)

Short bottom longline (1996-2016)

Long bottom longline (1996-2016)

Used species' specific depth ranges

CPUE in $\frac{Catch}{Trap*hr}$

Method

- Delta-GLM standardized

- Index normalized to long term average

- Error bars are $\pm 95\%$ CI



Caveats

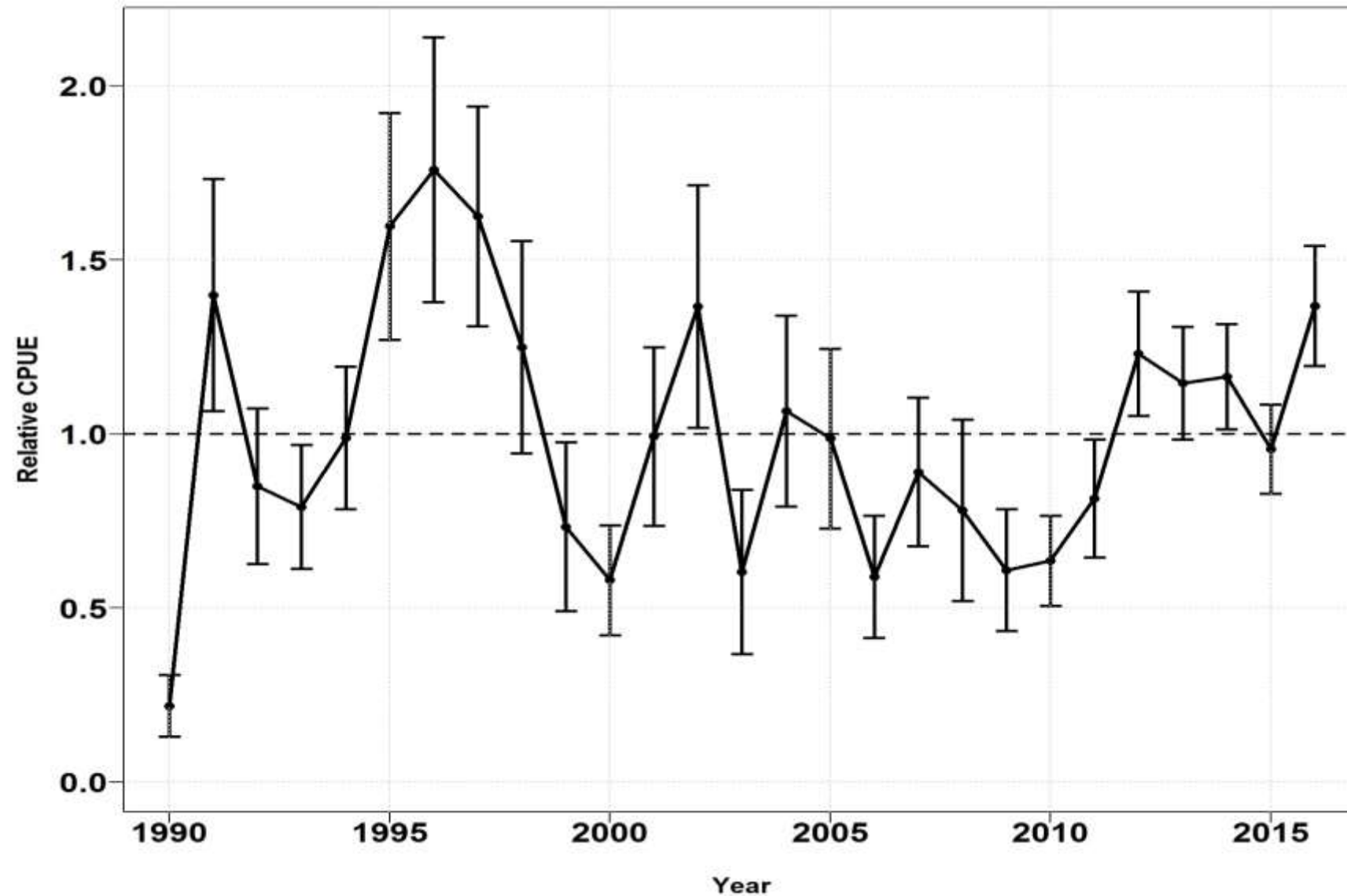
Summary overview, not an update of stock status



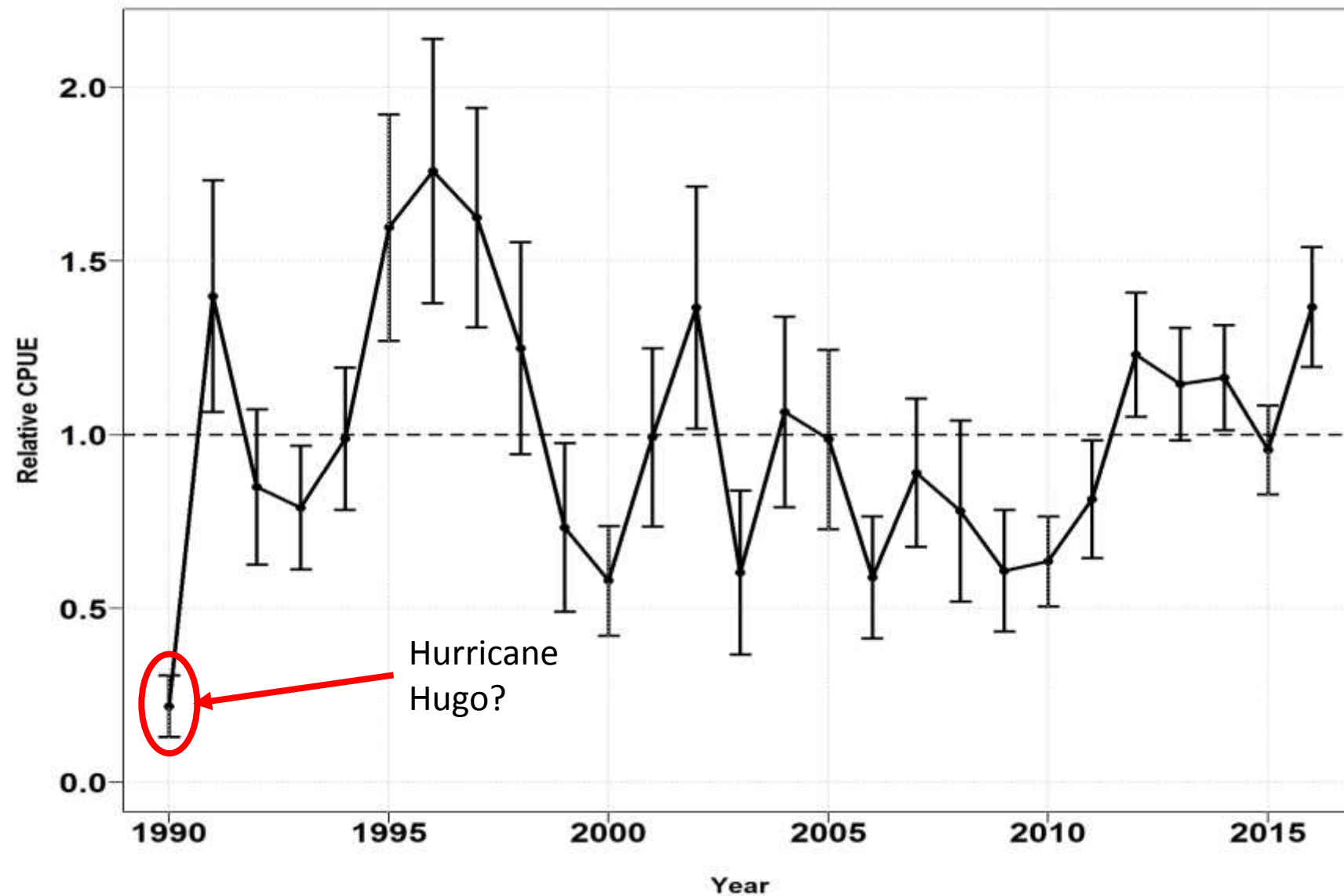
Constraints, stratification, units, and models for CPUE may be different from those used in (SEDAR) stock assessments

Many species have not been assessed or updated through SEDAR process and not all trends in analyses have been discussed in SEDAR framework

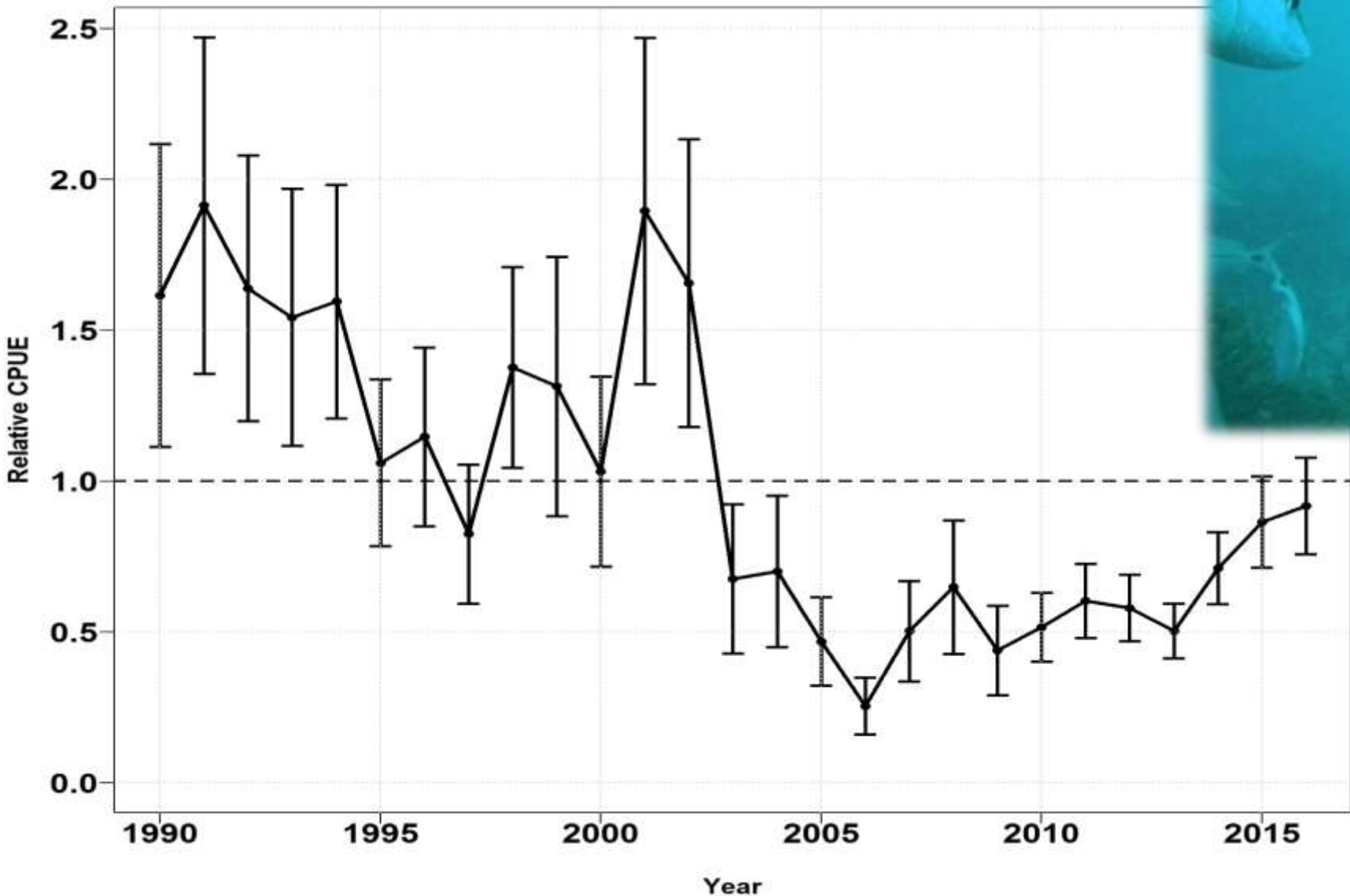
Gray Triggerfish – Chevron Trap



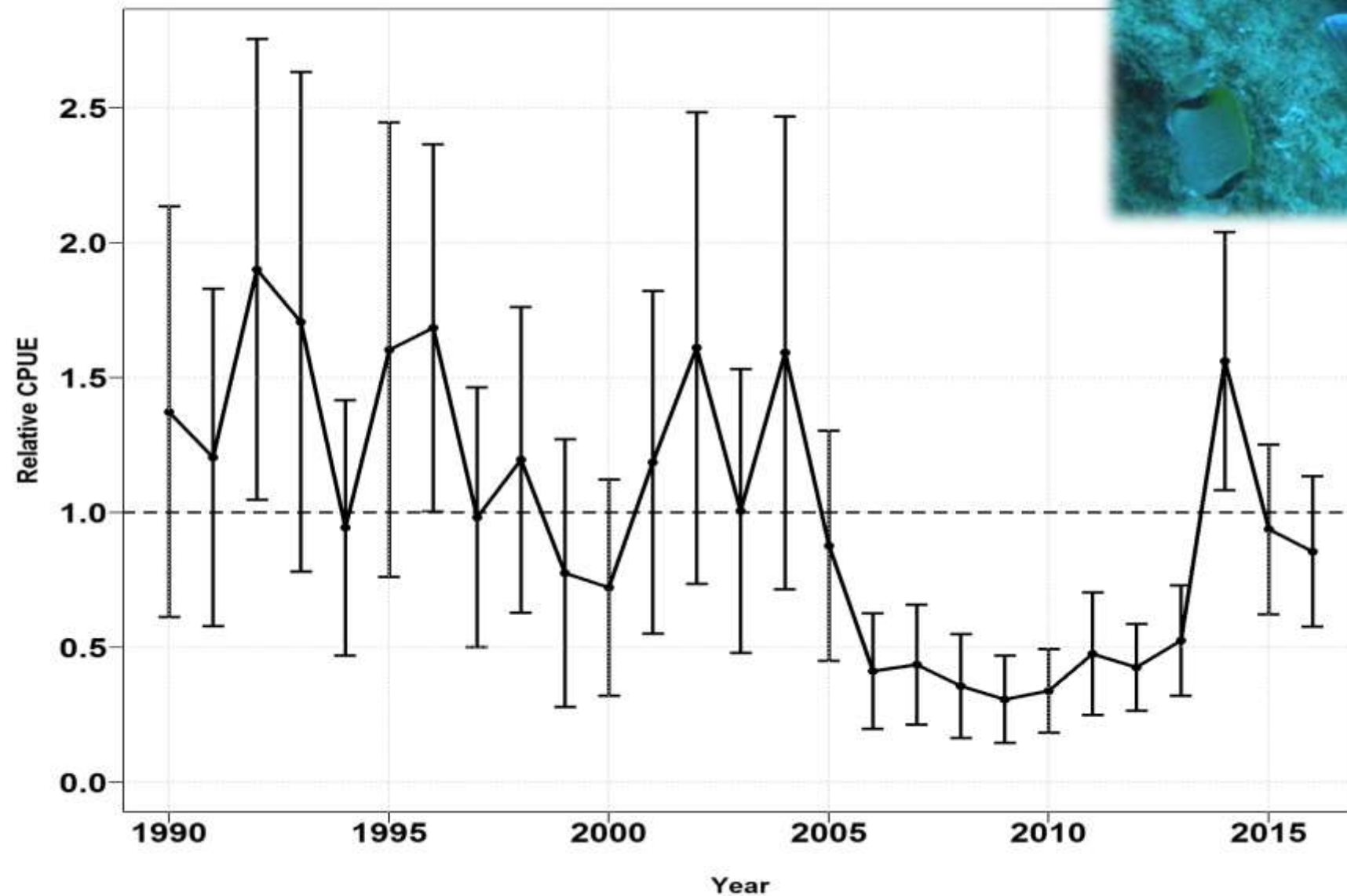
Gray Triggerfish – Chevron Trap



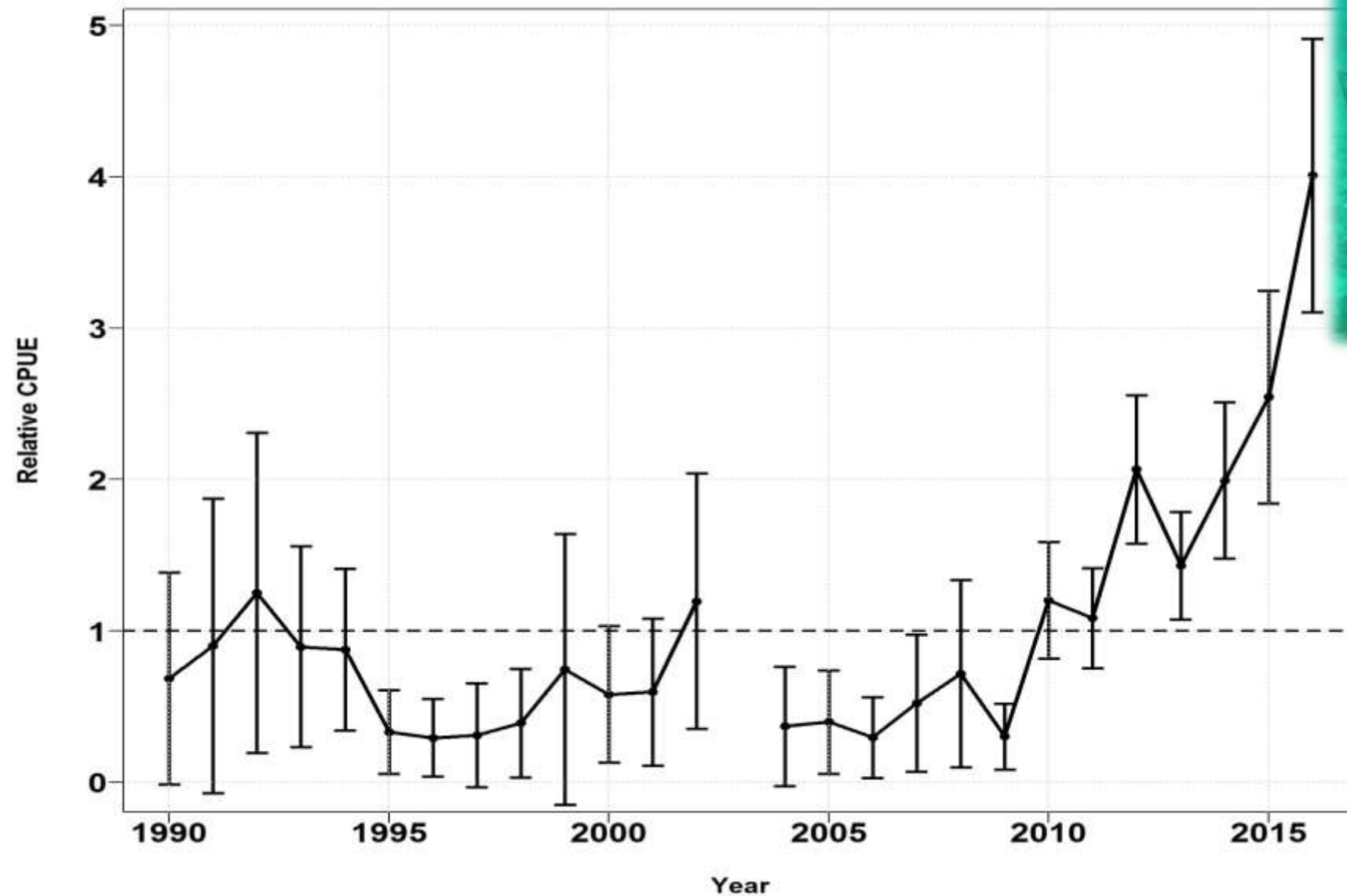
Tomtate – Chevron Trap



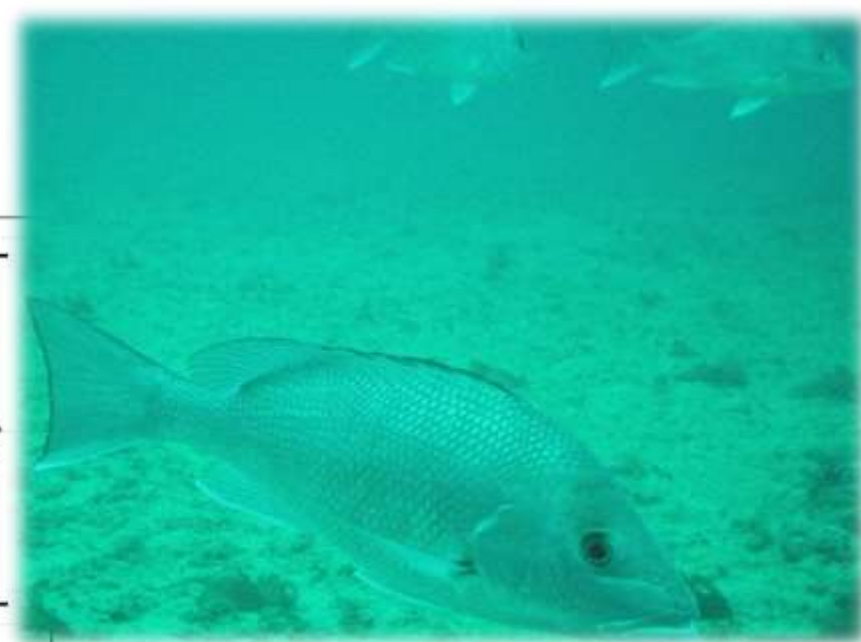
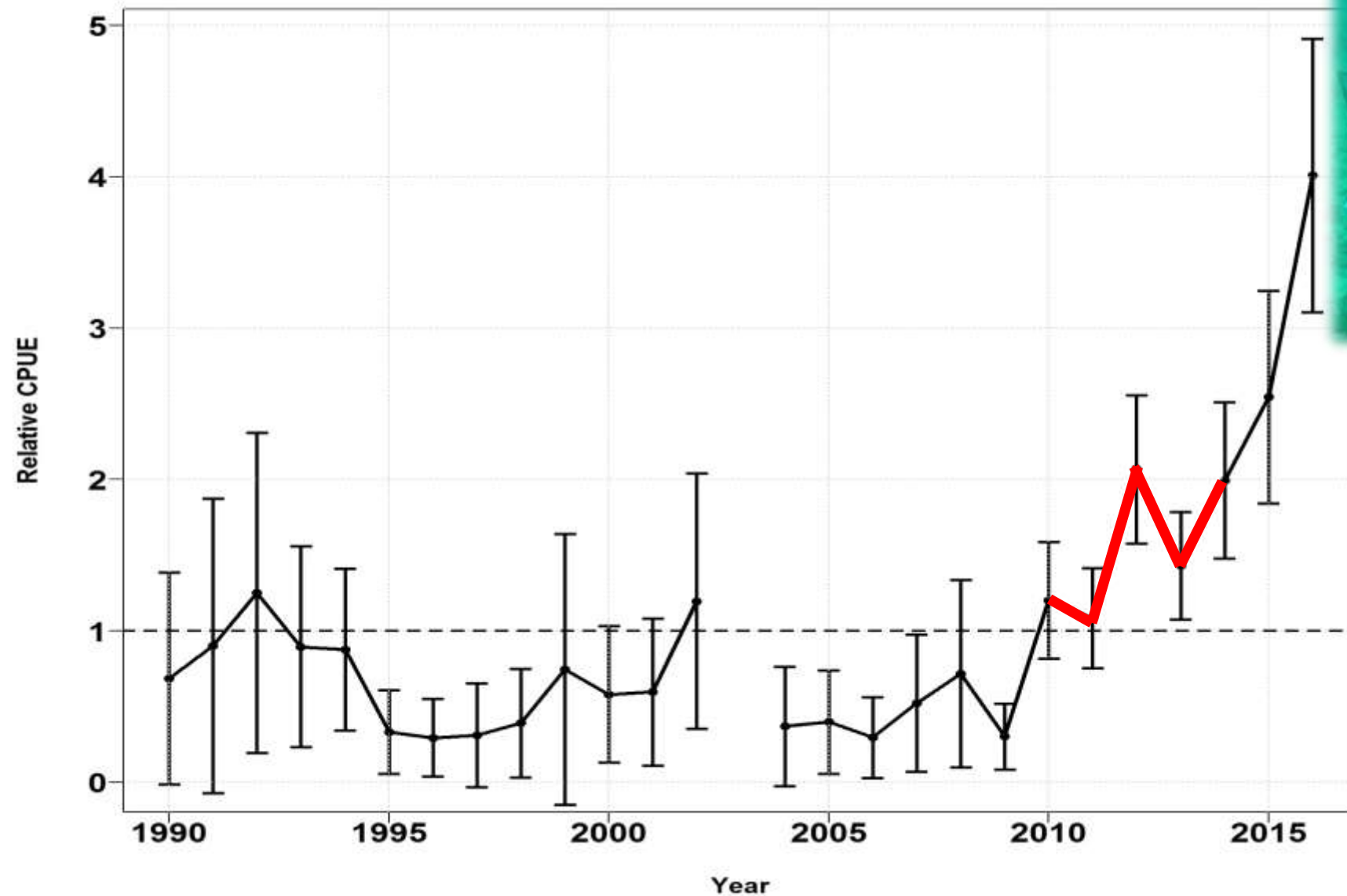
White Grunt – Chevron Trap



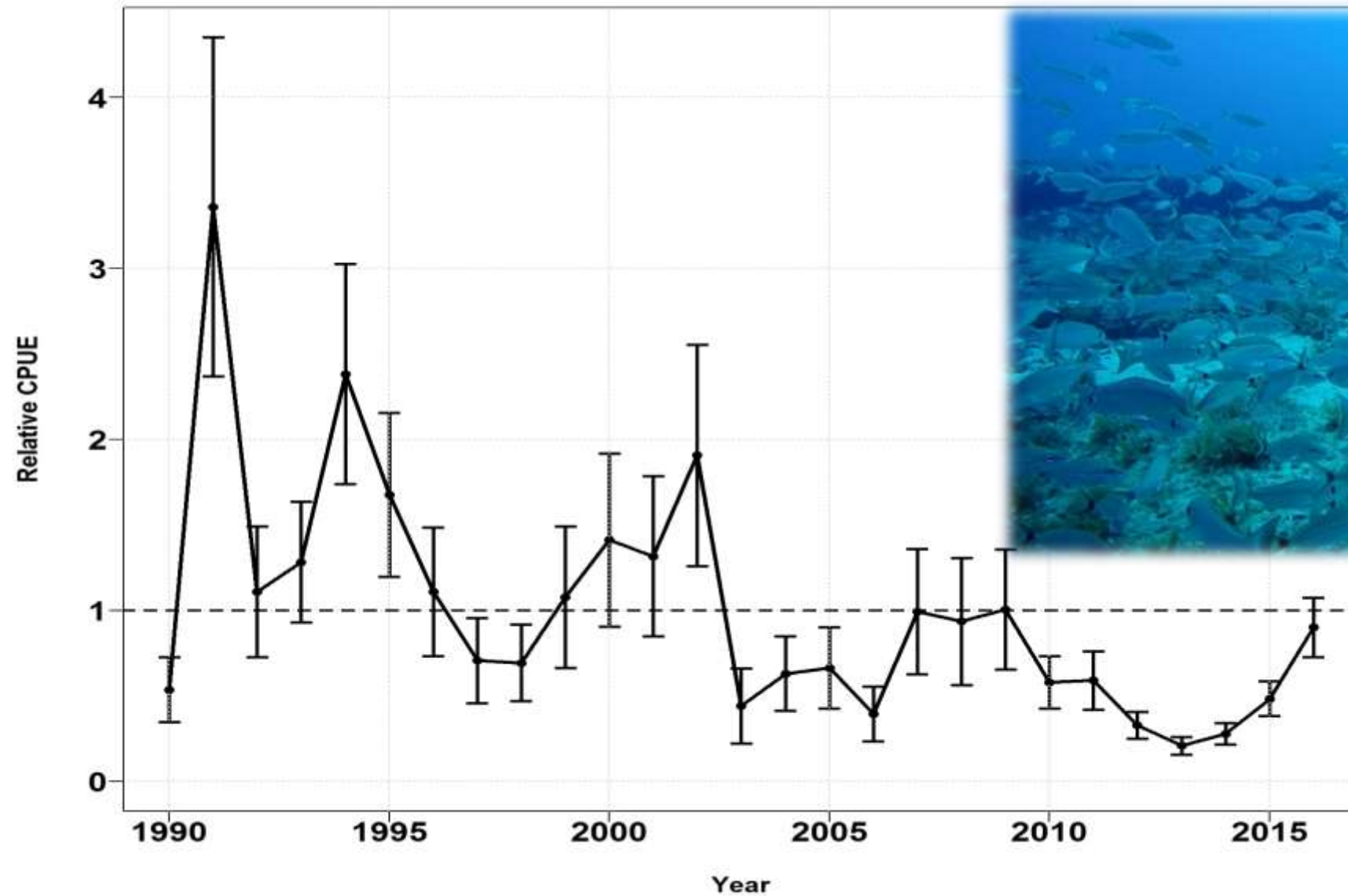
Red Snapper – Chevron Trap



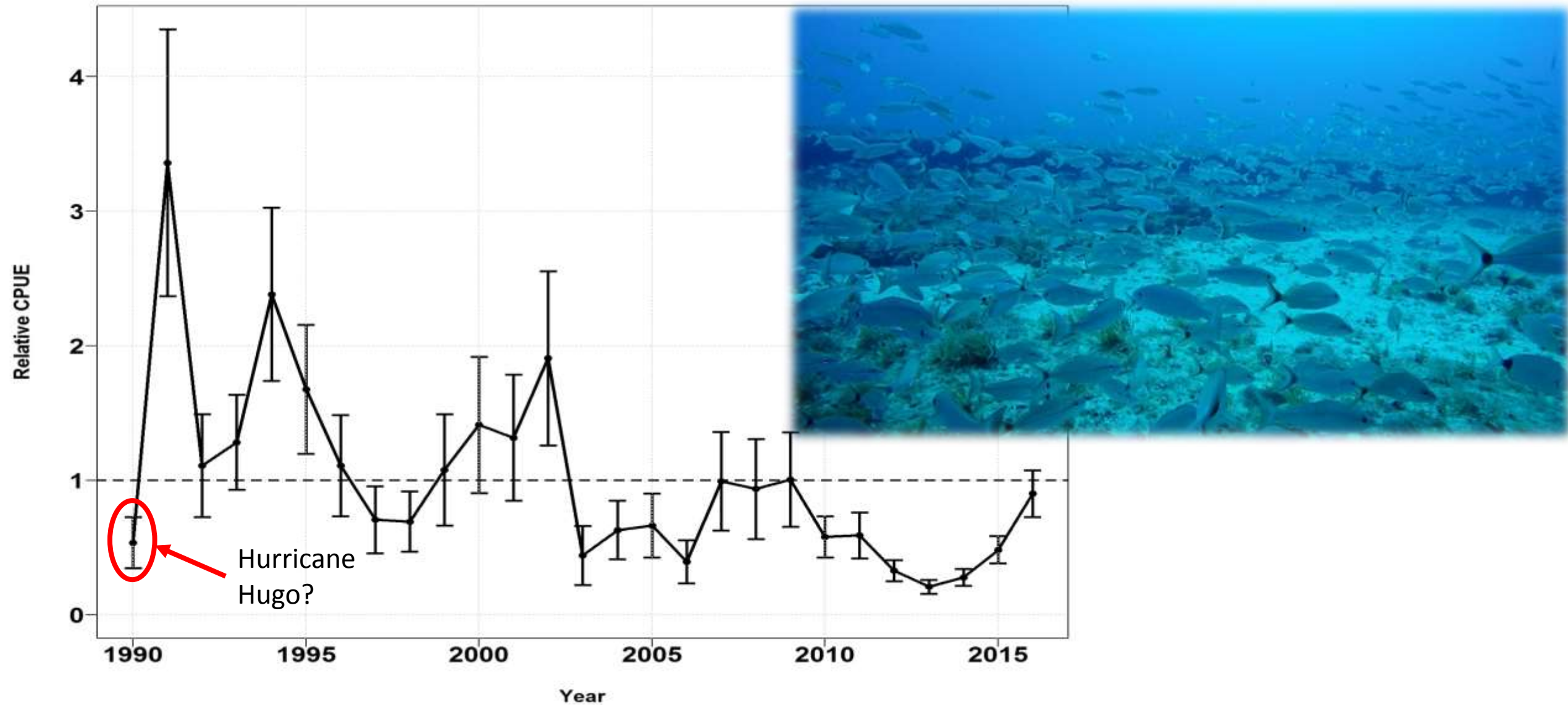
Red Snapper – Chevron Trap



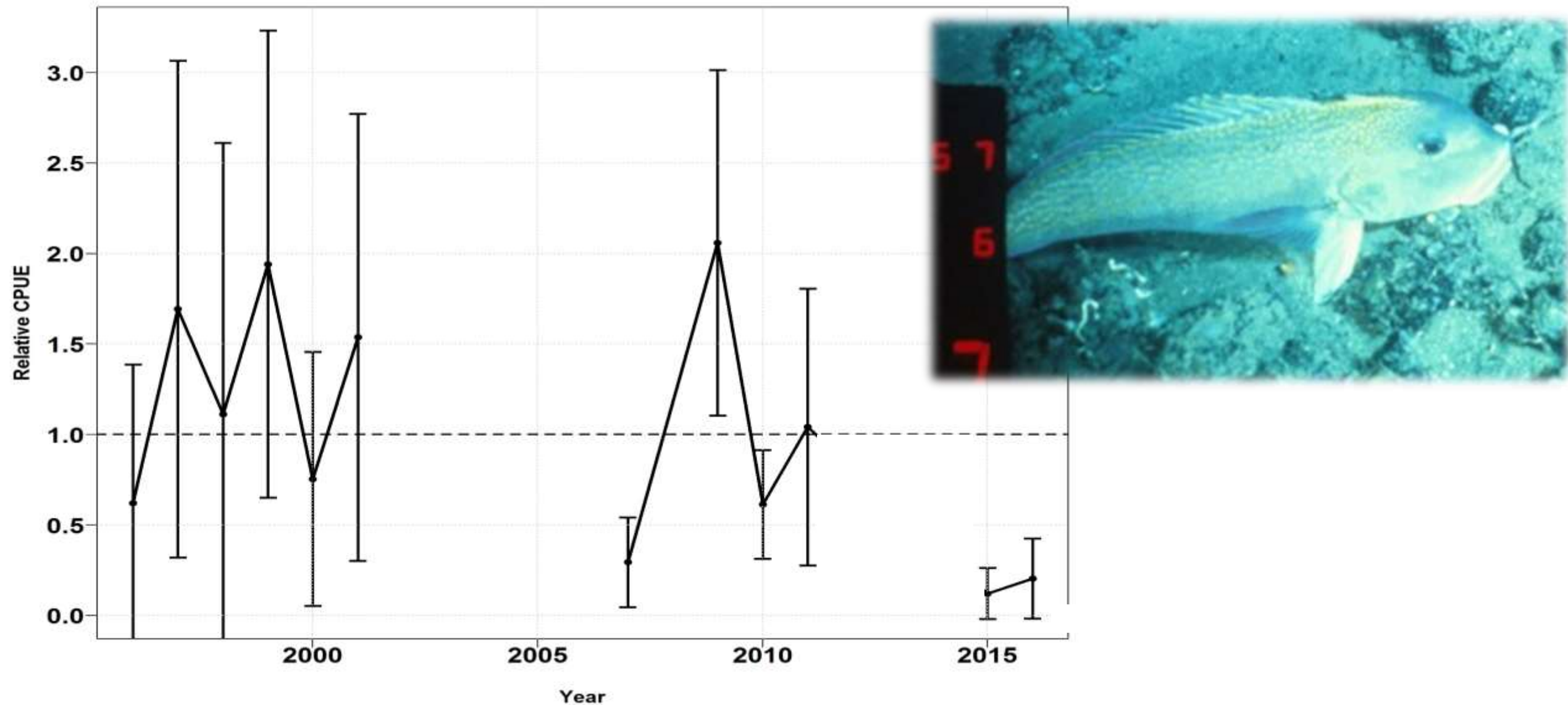
Vermilion Snapper – Chevron Trap



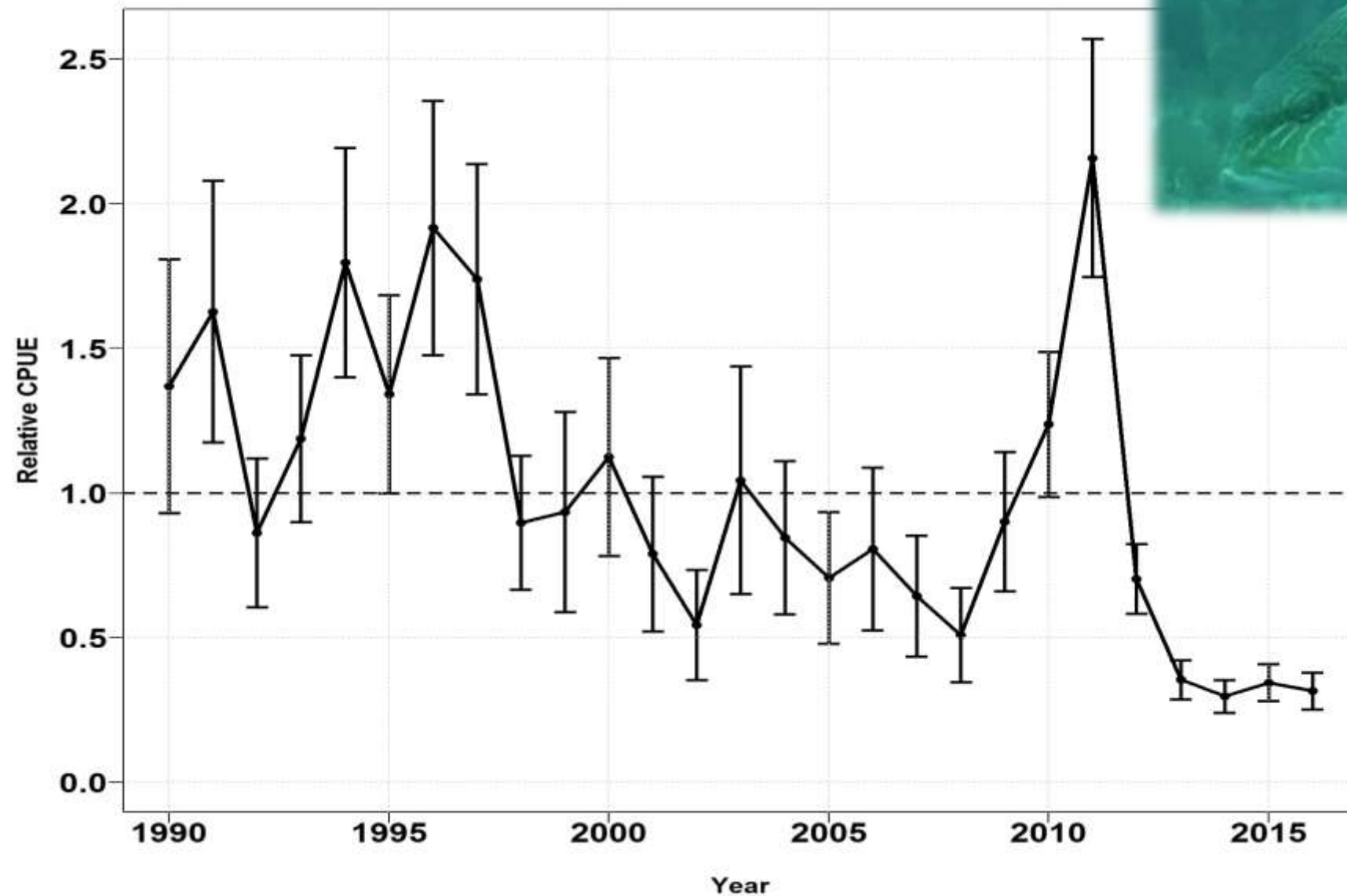
Vermilion Snapper – Chevron Trap



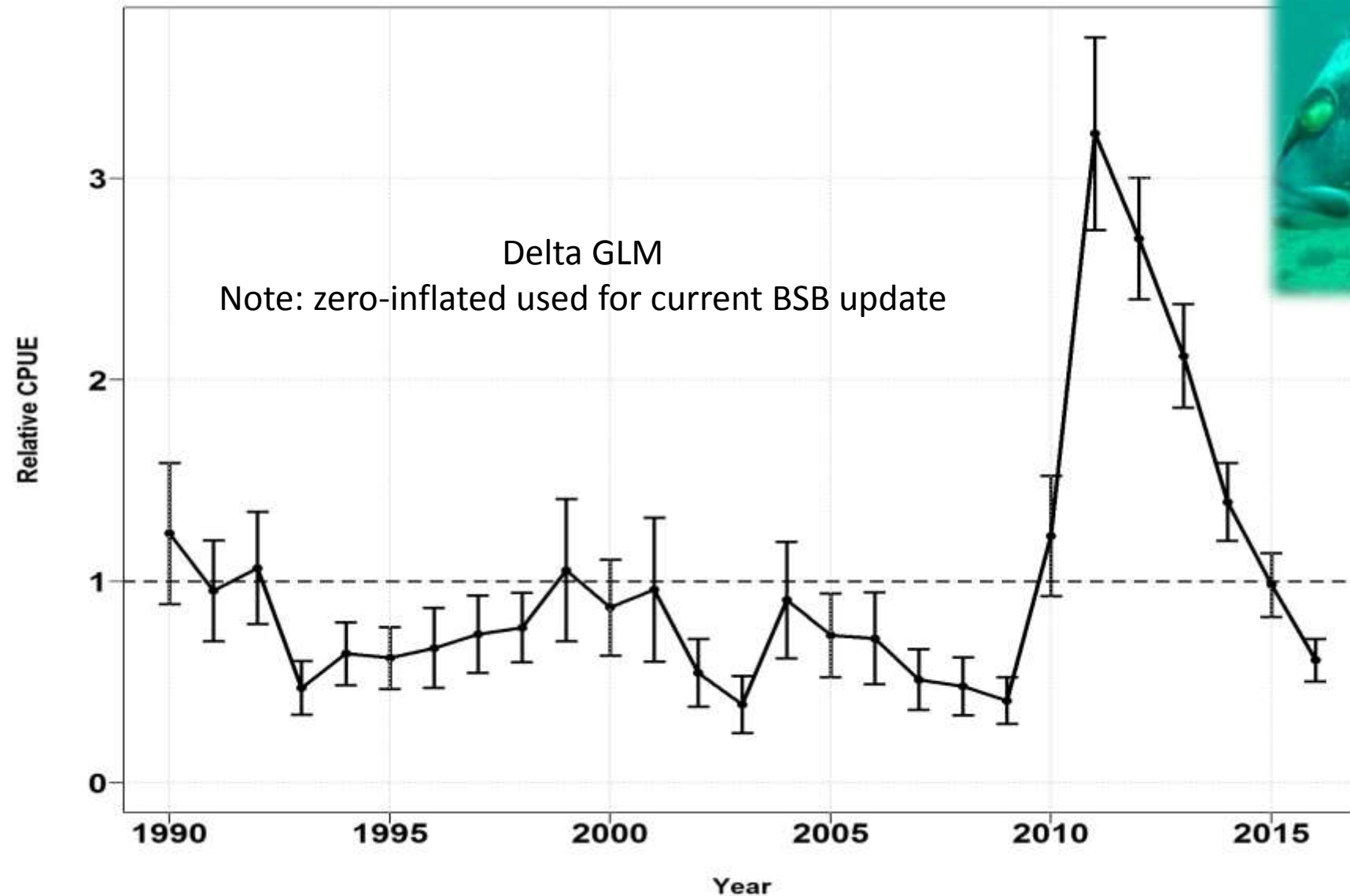
Golden Tilefish – Long Bottom Longline



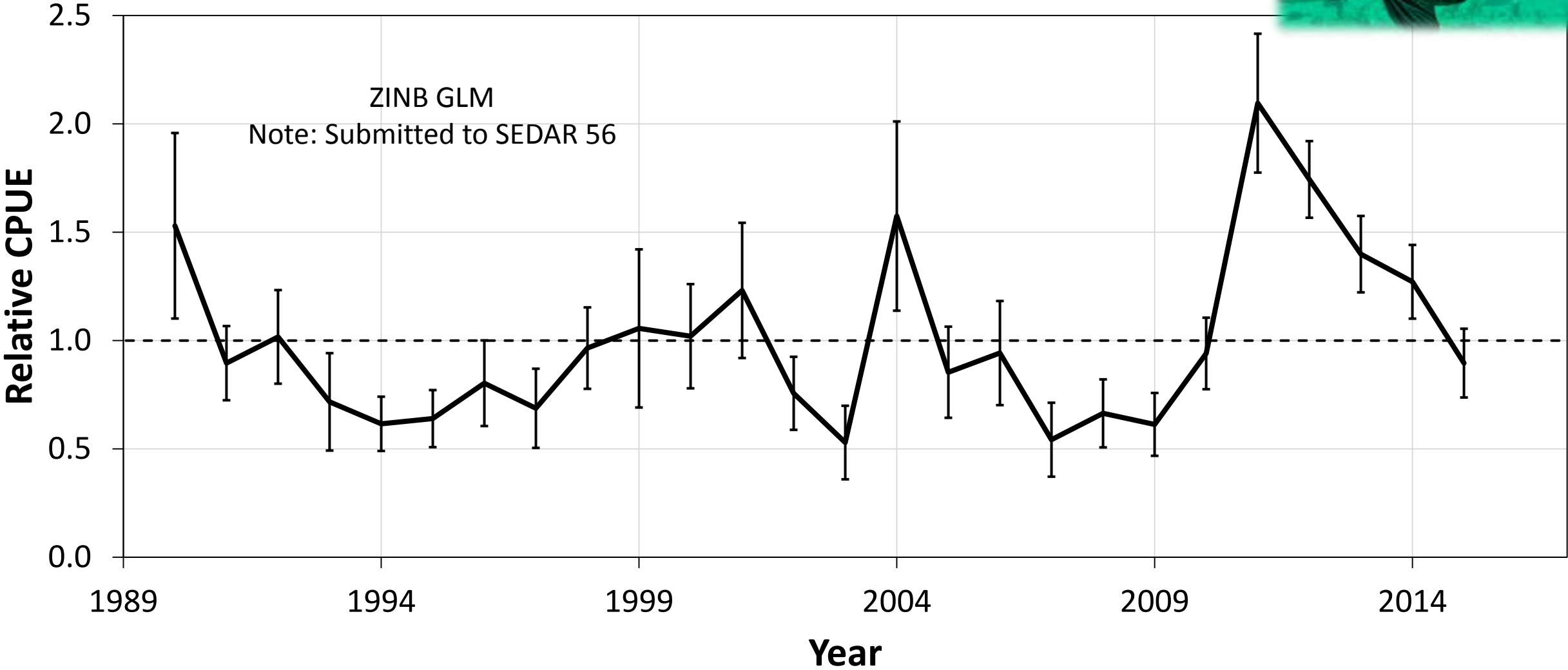
Bank Sea Bass – Chevron Trap



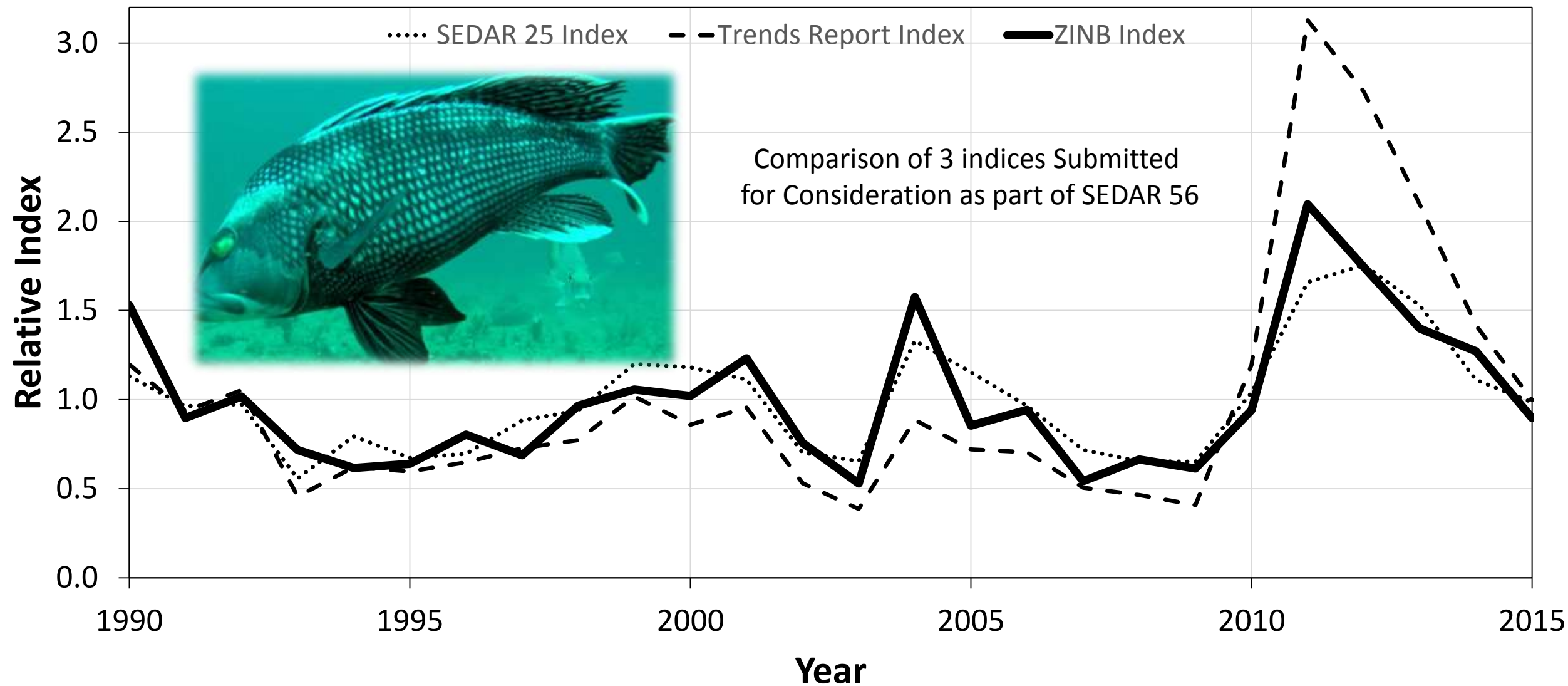
Black Sea Bass – Chevron Trap



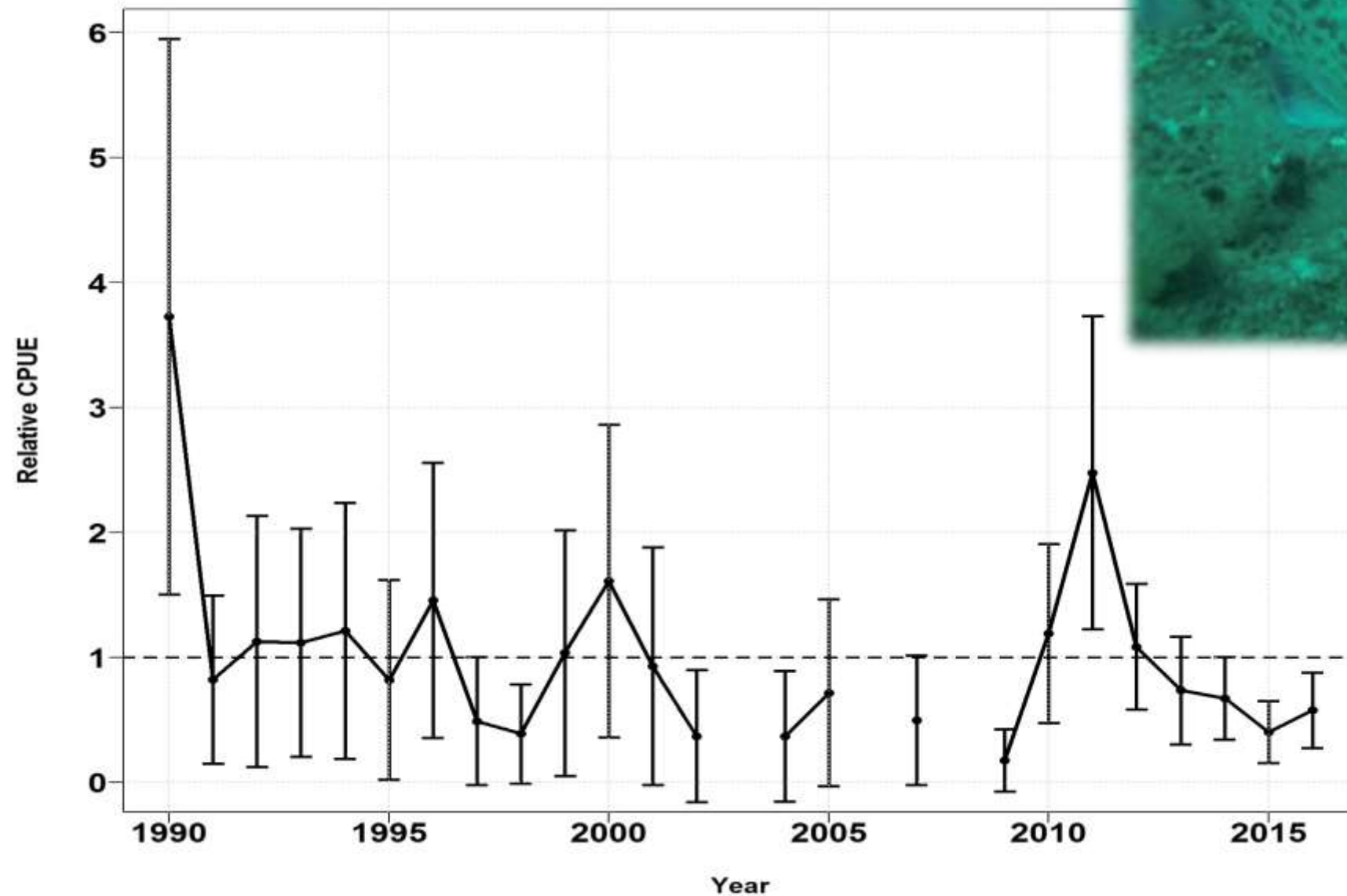
Black Sea Bass – Chevron Trap



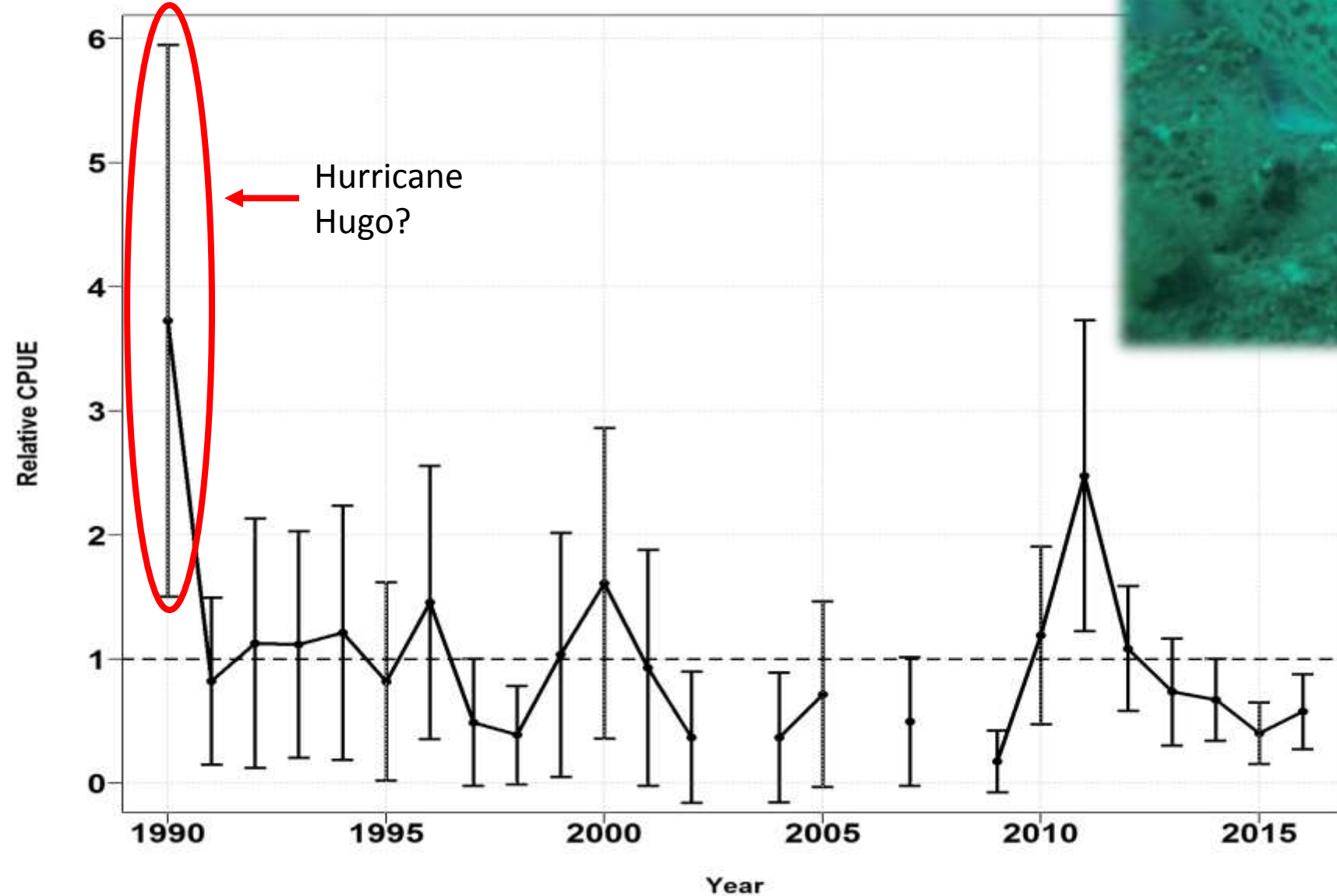
Black Sea Bass – Chevron Trap



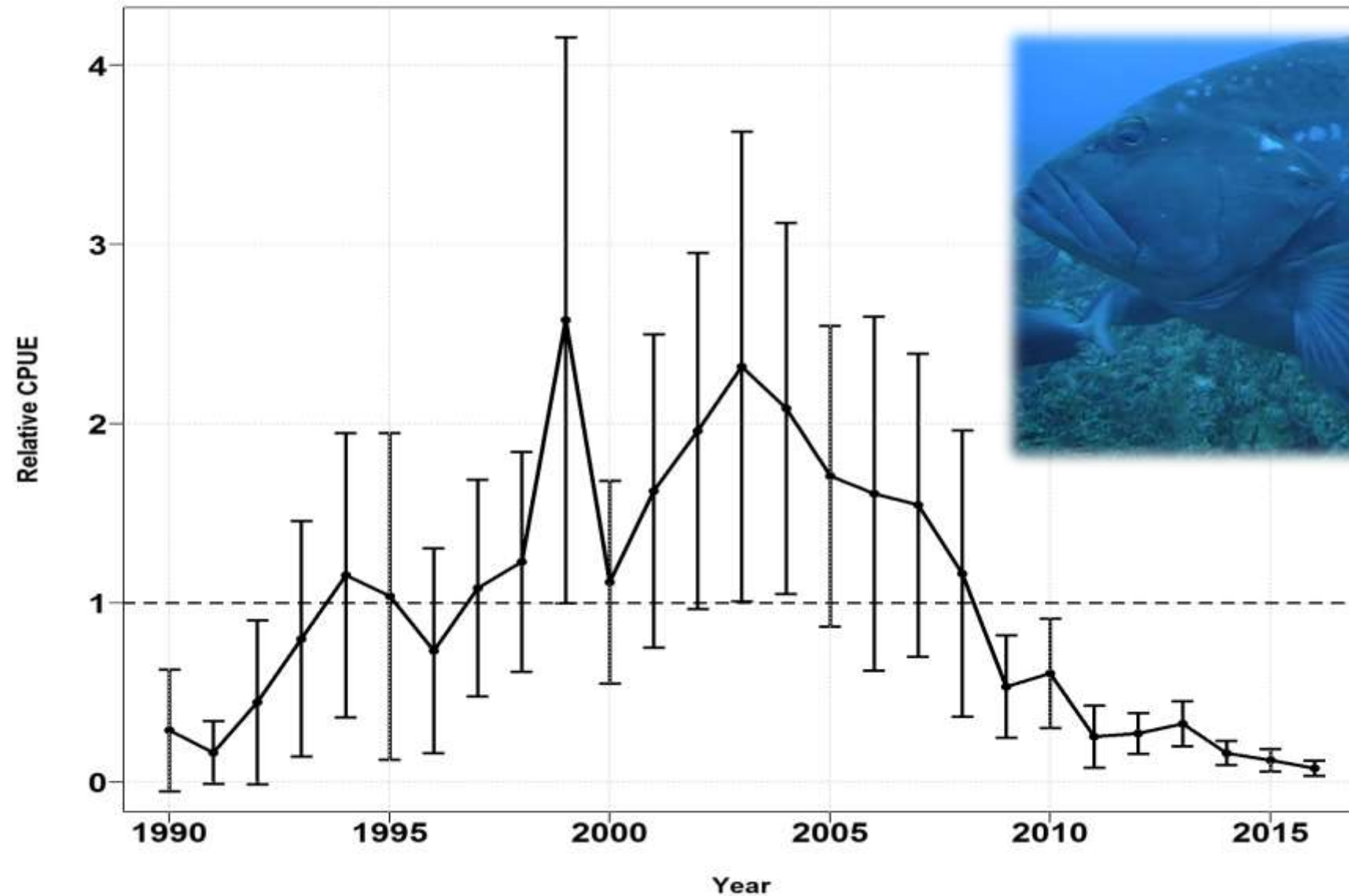
Gag – Chevron Trap



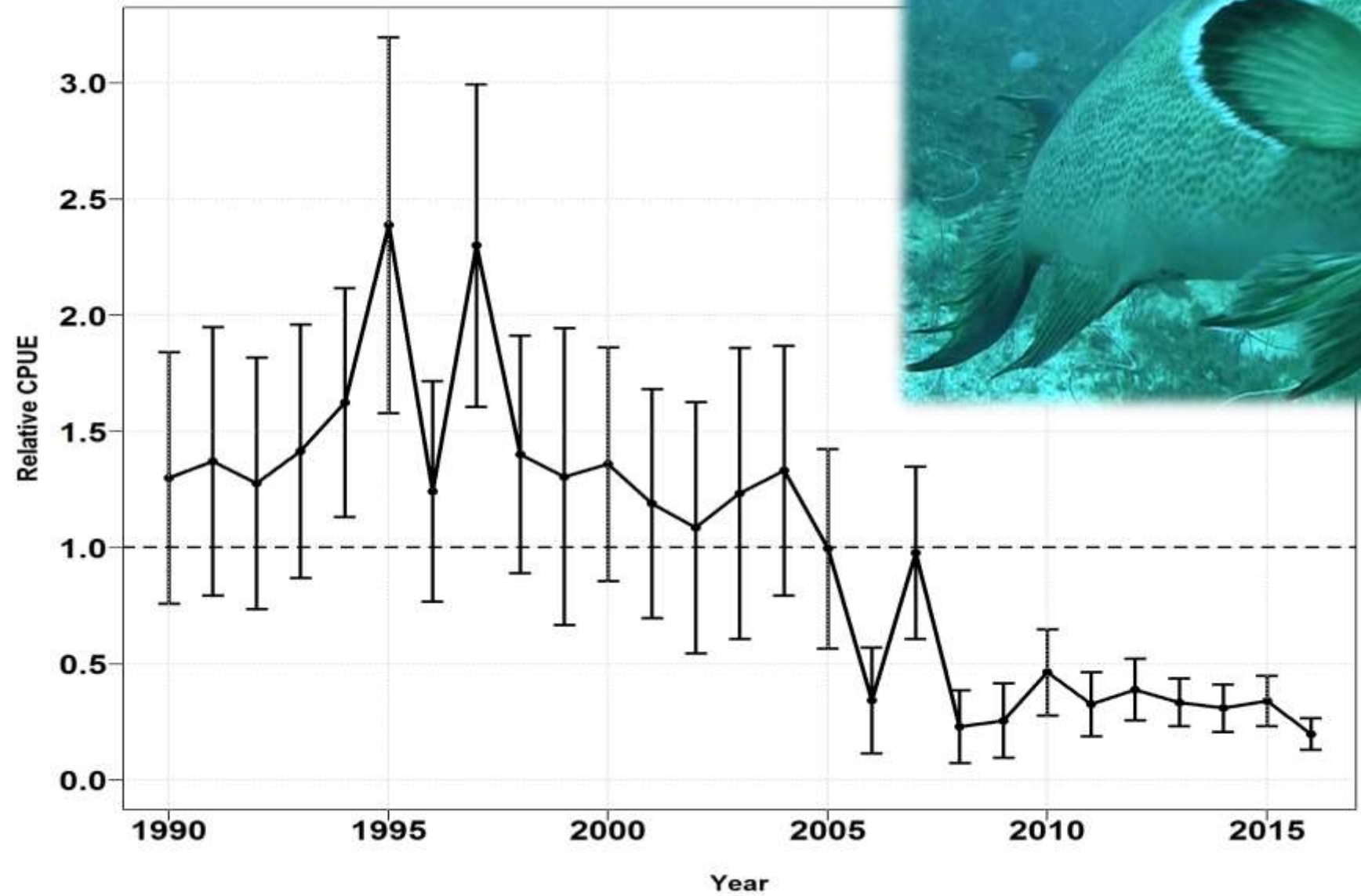
Gag – Chevron Trap



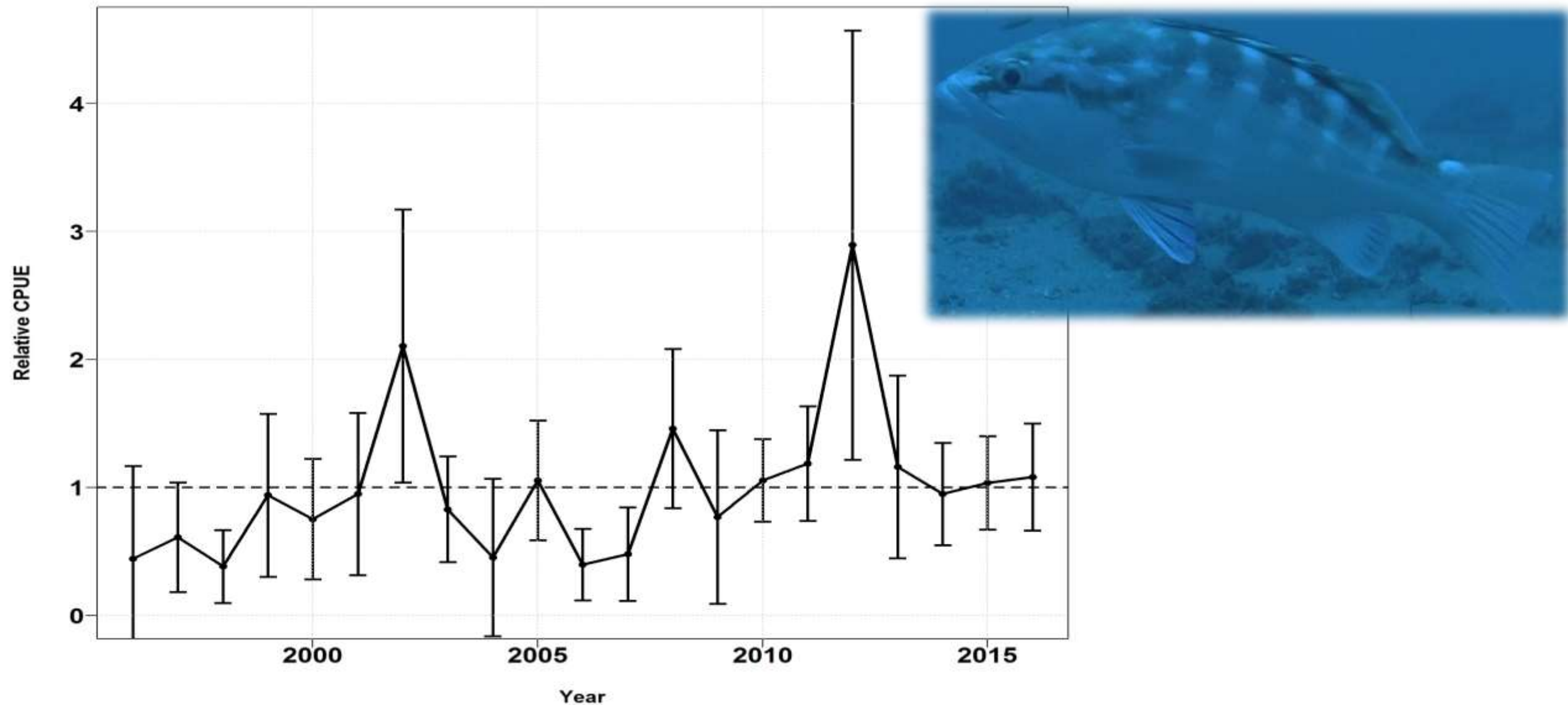
Red Grouper – Chevron Trap



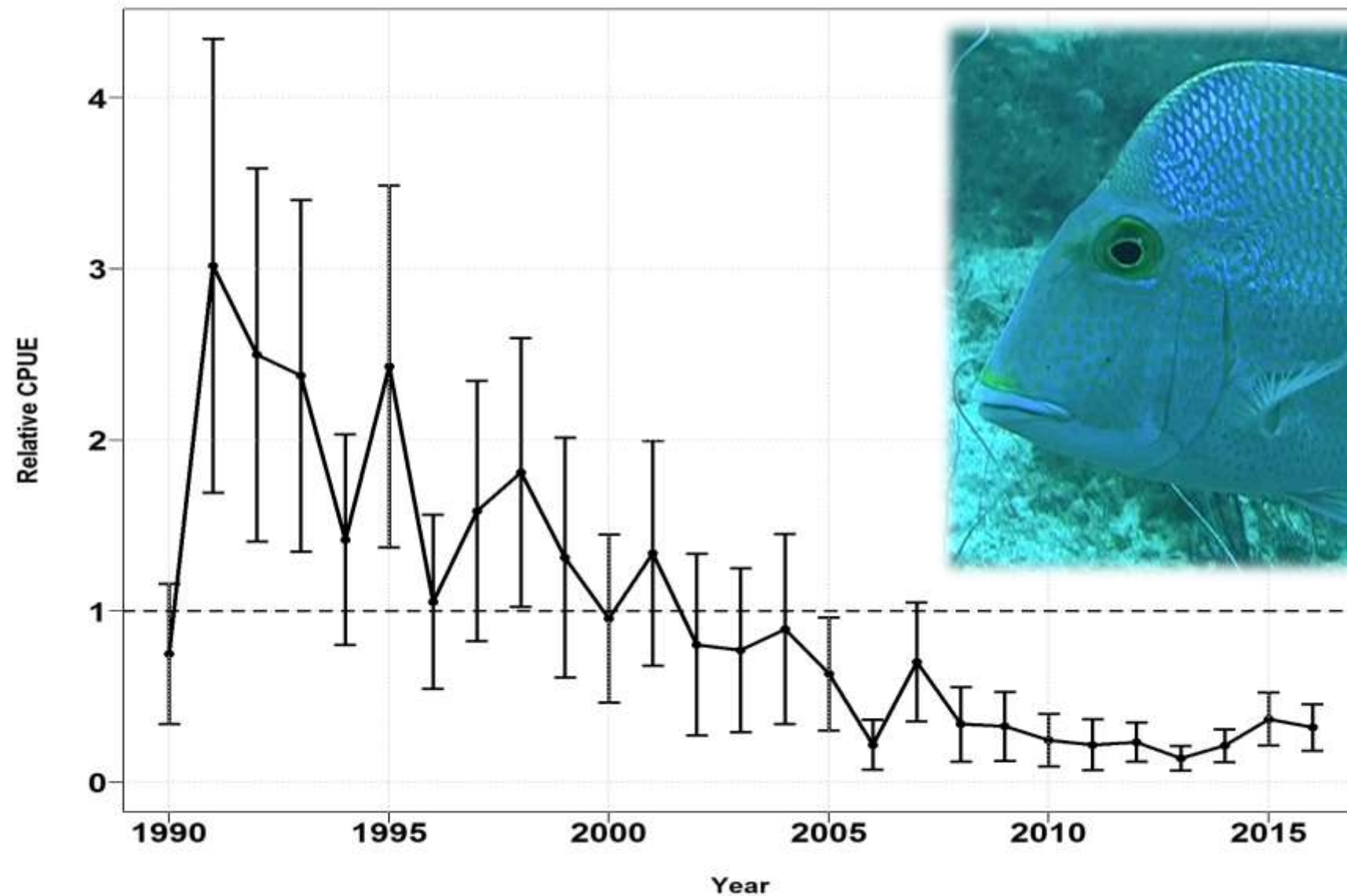
Scamp – Chevron Trap



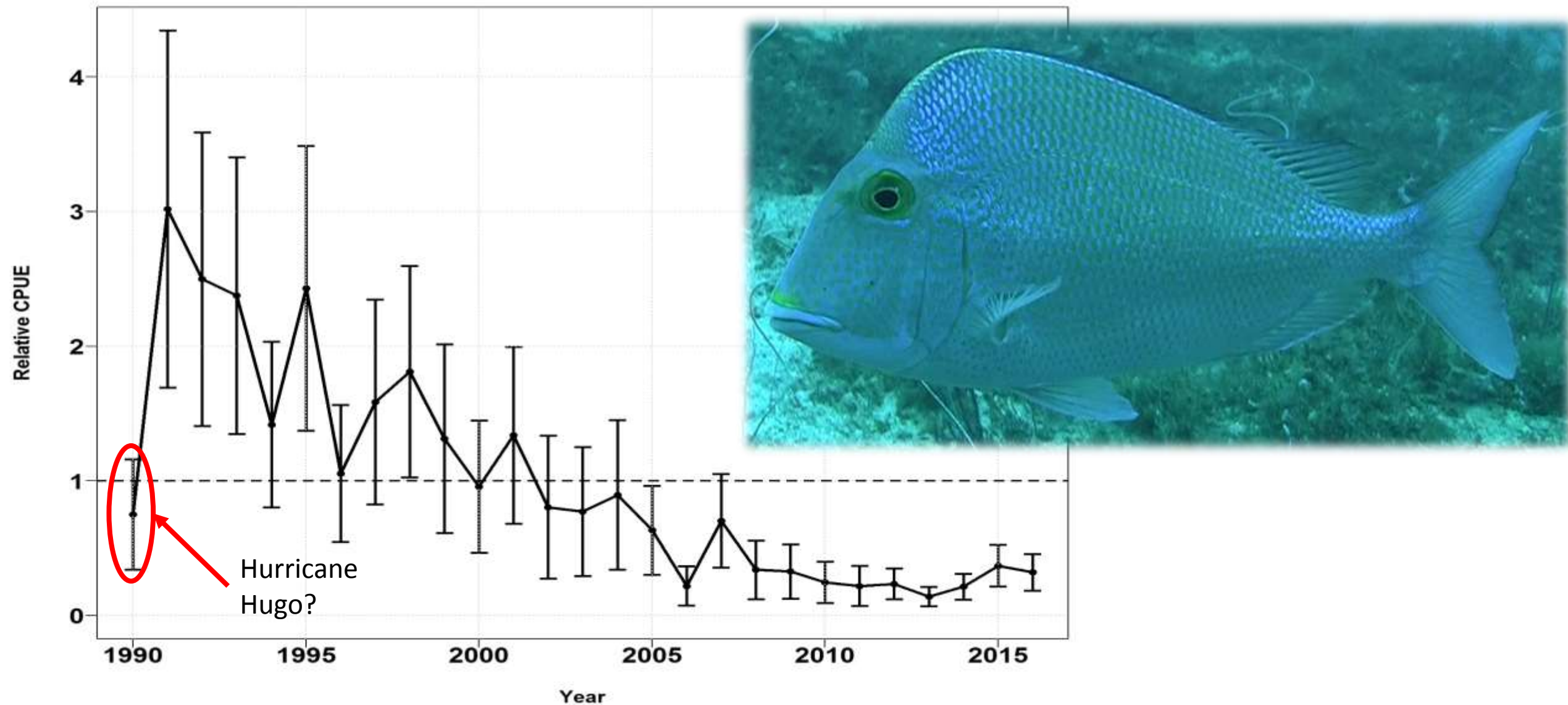
Snowy Grouper – Short Bottom Longline



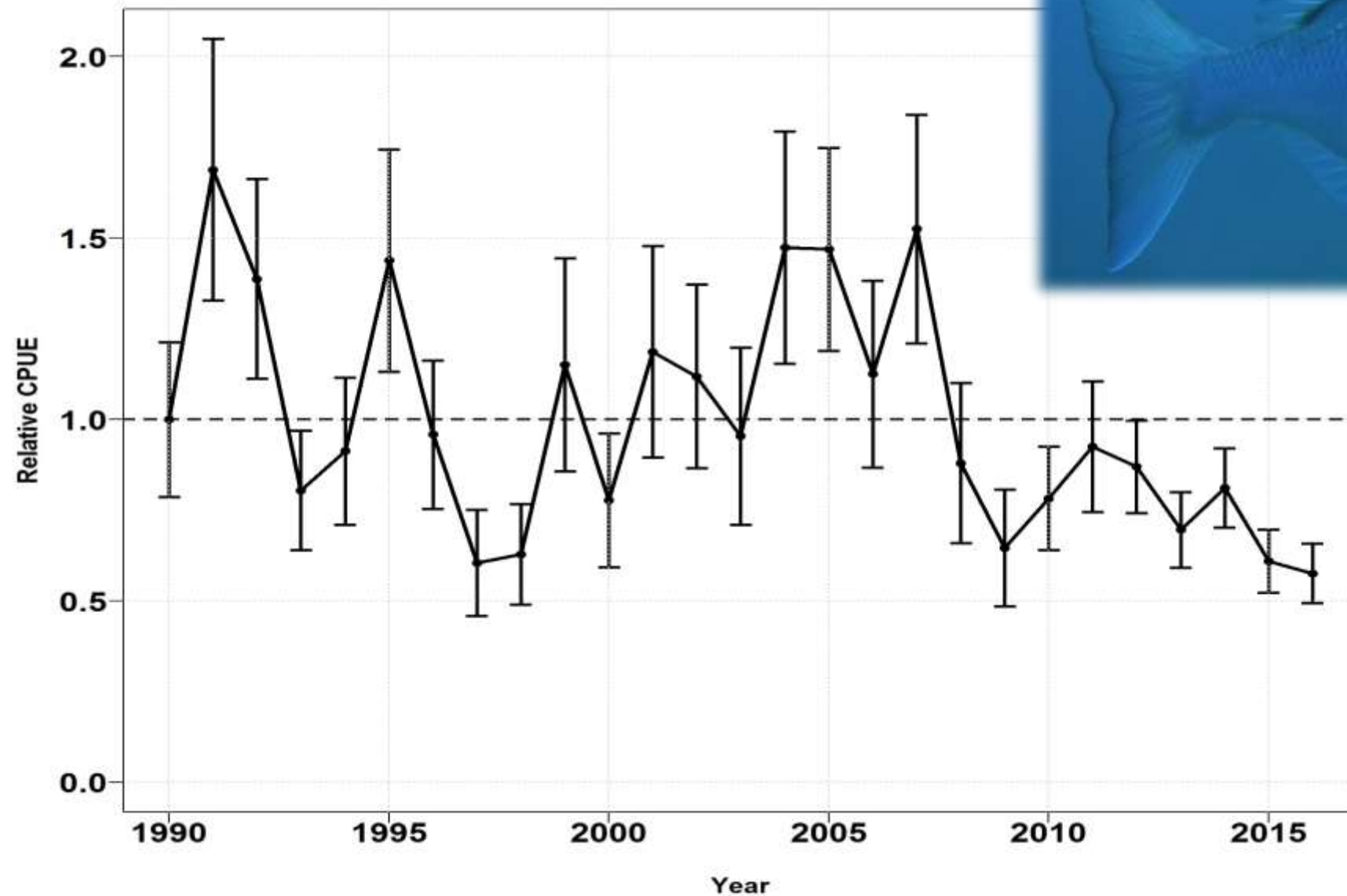
Knobbed Porgy – Chevron Trap



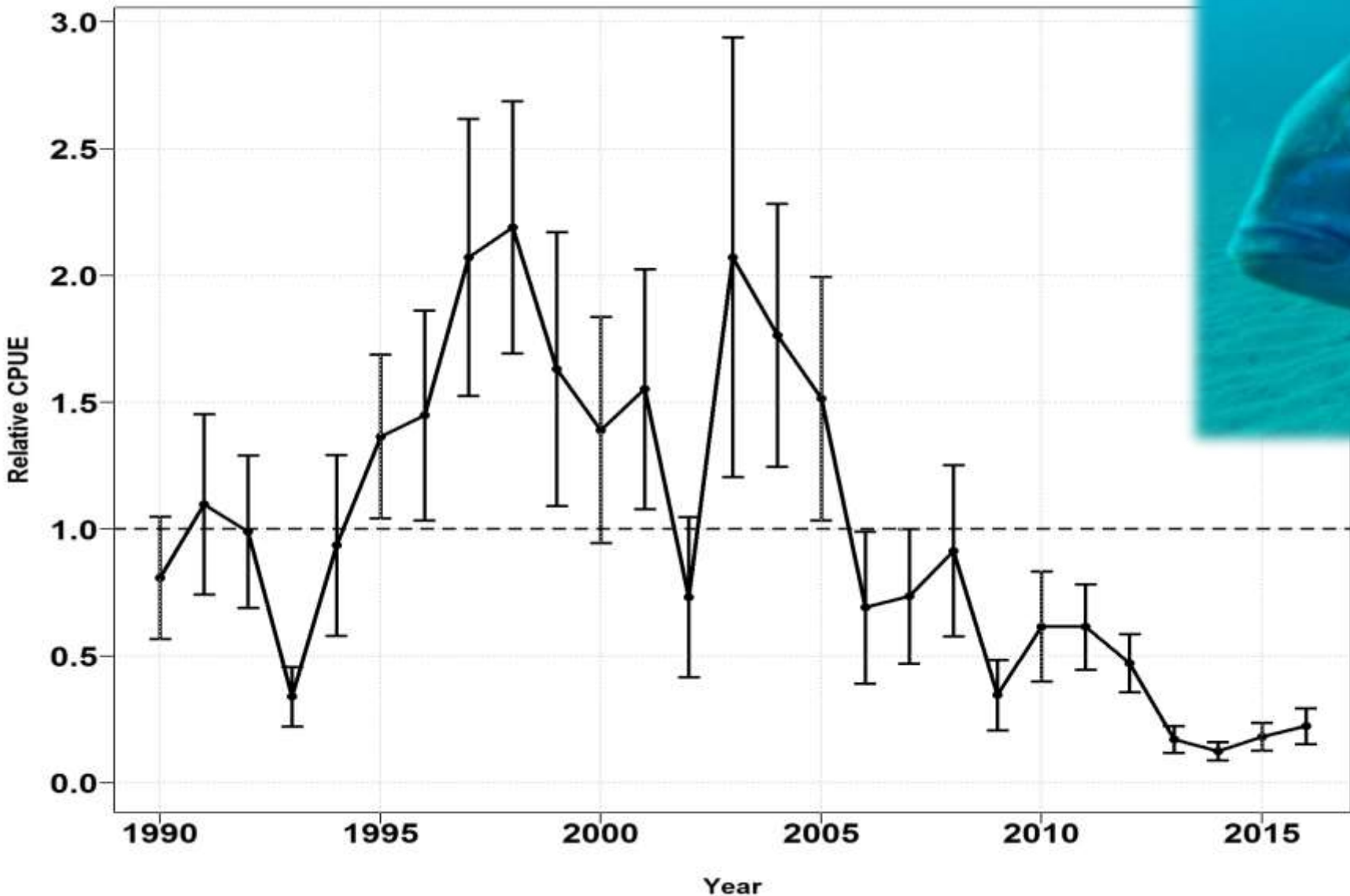
Knobbed Porgy – Chevron Trap



Red Porgy – Chevron Trap



Stenotomus sp. – Chevron Trap





Acknowledgements:
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Research Vessel Crews

Questions???