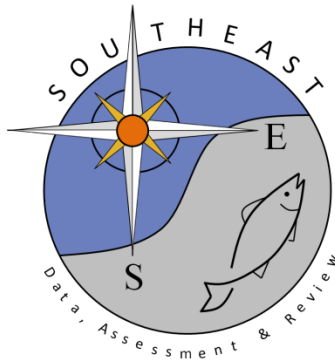


Commercial discard data limitations for Hogfish (*Lachnolaimus maximus*) in Florida for the Vertical Line and Spearfishing fleet

Kevin Thompson, Sarina Atkinson, and Gary Decossas

SEDAR94-DW-09

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Background

Previously, Hogfish assessments in Florida calculated commercial discards for the vertical line (handline and electric/hydraulic “bandit” gear) and spearfishing fisheries using Southeast Fisheries Science Center (SEFSC) Discard Logbook Program data (Addis et al. 2018). Since the SEDAR 37 update in 2018, analyses conducted by NOAA-SEFSC staff have indicated that the discard logbook data should no longer be used for assessments (Alhale et al. 2024). This recommendation is due to several factors, including: a lack of accountability and recall bias from fisher-reported data, inaccurate reporting of trips with “no discard interactions” when compared to observer data, and an increasing percentage of trips reporting “no discard interactions” through time (Alhale et al. 2024). Given these limitations, the recommendation has been to use observer-based discard methods first presented for Gulf of America Red Grouper (Smith et al. 2018) and subsequently used in several SEDARs for reef fish species in both the Gulf and South Atlantic. Furthermore, the use of observer data has also been expanded to include a procedure for estimating discards for more data-limited species by incorporating a less complex stratification of catch, as illustrated first for South Atlantic Golden Tilefish (Thompson et al. 2024). This working paper presents our initial exploratory analyses of available observer data for Florida Hogfish.

Analyses and Discussion

We evaluated vertical line observer data for the representative areas for this assessment as well as data west and north of Florida (Figure 1). These fishing areas within Florida were separated into 5 regions where all fishing areas south of 25° N are considered Florida Keys, fishing areas 3-6 is Southwest Florida (SE FL), 7-10 is Northwest Florida (NW FL), 2580-2780 is Southeast Florida (SE FL), and 2876-3081 is Northeast Florida (NE FL). Data North of Florida was also considered. Sample size analyses indicate that there are very few observations of discarded Hogfish in the vertical line fishery, with only 4 total trips observing discards of Hogfish in the Keys and SW FL and none in NE FL (Table 1). These sample sizes are too few to use the data-poor approach used in previous SEDARs. Also, no observer data are available on spearfishing gear trips.

Further review of previously submitted commercial discards in the SEDAR 37 update (Addis et al. 2018; Table 2) show that while discards were estimated, they were very low with < 300 fish annually for spearfishing and vertical line in the Keys and SE FL and <250 fish for spearfishing in western Florida. Vertical line discards were zero across all years in that region (Table 2).

Given the lack of data, and previously estimated minimal discards the recommendation is to not calculate commercial discards for this species. This recommendation was also presented to the lead analyst previous to a pre-workshop data call in which they agreed that the best way forward was to exclude the commercial discard timeseries.

Literature Cited

Addis, D.T., E.H Smith, and C.E. Swanson. 2018. STOCK ASSESSMENT OF HOGFISH IN THE WEST FLORIDA SHELF STOCK 1986-2016. SEDAR, North Charleston SC. 211 pp. available online at: <https://sedarweb.org/assessments/sedar-37-update-gulf-of-mexico-hogfish/>

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Thompson, K., S. Atkinson, G. Decossas. 2024. Estimated Commercial Discards of South Atlantic Golden Tilefish (*Lopholatilus chamaeleonticeps*) Using Limited Observer Data. SEDAR89-WP-05. SEDAR, North Charleston, SC. 15 pp.

Table 1. List of sample sizes with observations of Hogfish in the vertical line fishery by program and Florida stock area

Region	Year	Total Observer Trips	Hogfish Observer Trips	Kept Hogfish Observer Trips	Discarded Hogfish Observer Trips
FL KEYS	2012	11	1	1	0
FL KEYS	2013	9	2	1	1
FL KEYS	2014	14	1	1	1
FL KEYS	2015	4	1	1	0
FL KEYS	2017	6	2	2	1
NW FL	2016	30	1	1	0
North of FL	2007	21	7	7	0
North of FL	2008	5	2	2	0
North of FL	2009	5	1	1	0
North of FL	2011	10	1	1	0
North of FL	2014	11	2	2	0
North of FL	2015	16	1	1	0
North of FL	2016	12	2	2	0
North of FL	2021	10	1	1	0
North of FL	2022	101	9	9	0
North of FL	2023	58	6	6	0
North of FL	2024	26	4	4	0
SW FL	2012	111	1	1	0
SW FL	2013	51	1	1	0
SW FL	2016	64	2	2	1
SW FL	2021	11	1	1	0

Table 2. Commercial discard estimates submitted and used in the SEDAR 37 update model (Reprinted from Addis et al. 2018).

Year	GA-NC		FLK/SEFL		WFL		Total
	Diving	Vertical line	Diving	Vertical line	Diving	Vertical line	
1993	0	12	181	154	40	0	388
1994	0	15	232	255	62	0	564
1995	0	14	232	197	39	0	483
1996	0	14	257	197	61	0	529
1997	0	14	289	226	69	0	598
1998	0	12	278	165	47	0	503
1999	0	9	235	200	45	0	489
2000	0	10	252	179	64	0	505
2001	0	12	239	132	59	0	441
2002	0	11	237	142	67	0	457
2003	0	9	185	112	88	0	393
2004	0	8	186	100	80	0	374
2005	0	8	172	85	87	0	352
2006	0	9	163	90	87	0	349
2007	0	9	212	93	82	0	396
2008	0	10	173	91	100	0	374
2009	0	9	133	109	103	0	355
2010	0	8	143	88	141	0	381
2011	0	7	166	97	128	0	397
2012	0	6	201	91	121	0	419
2013	0	5	144	74	79	0	302

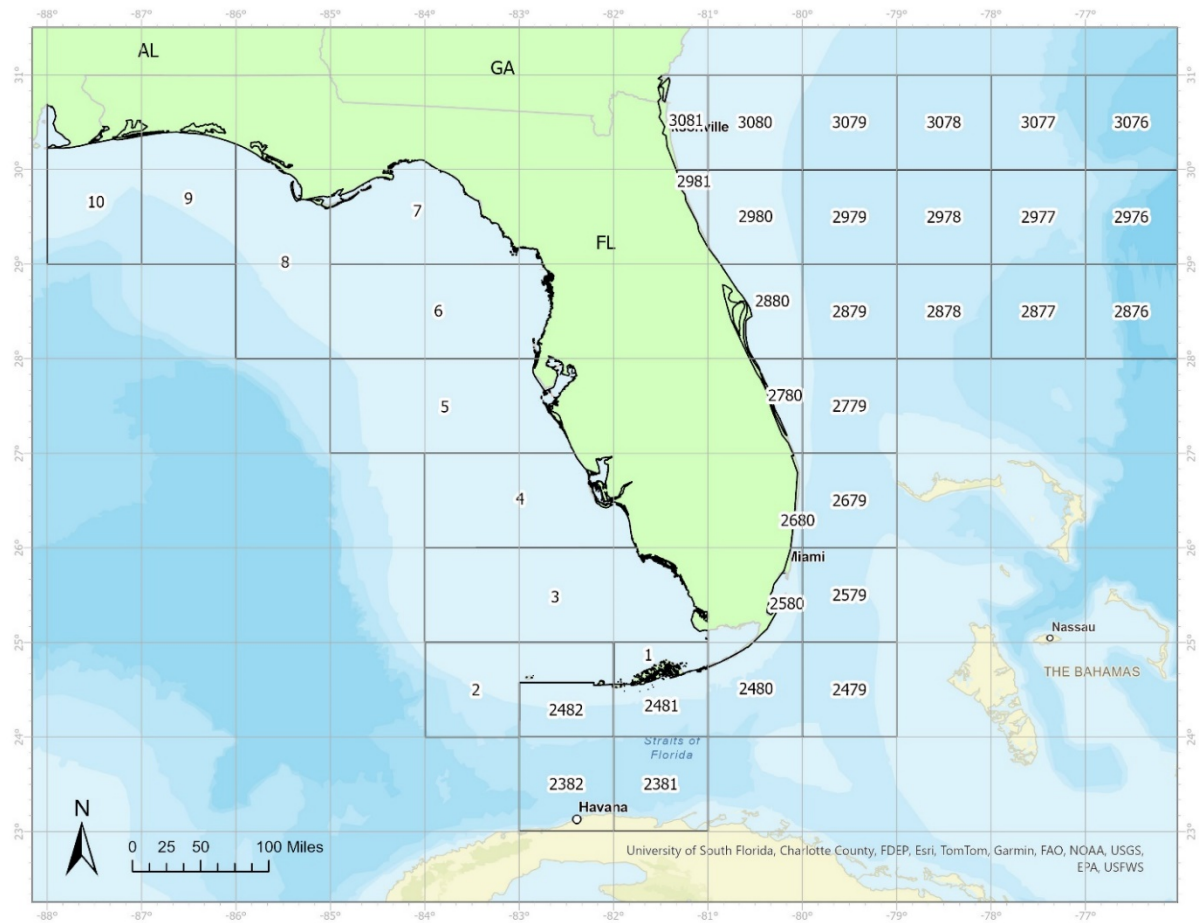


Figure 1. Map of coastal logbook fishing areas for Florida.