

OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION



FISH MANAGEMENT SURVEY REPORT

DURANT LAKE

2025

EXECUTIVE SUMMARY

Trap netting was conducted in fall of 2025 to evaluate the status of the crappie fishery. Durant Lake contains both white and black crappie with white crappie comprising 74% of the population in the 2025 survey (historical range 74% - 96%). Catch rate of all crappie was 19.5 fish/net-night in 2025. Historical catch rates vary greatly between years, ranging from a total CPUE of 3.9 – 53.5 fish/net-night (Table 1, Figure 1). This is likely due to inconsistent reproduction and/or recruitment. This was evident in 2025 with age-1 fish making up 91% of the sample. This points to a strong 2024 year class with inconsistent reproduction for several years prior.

Approximately 10% of the crappie population exceeded 10 inches in the 2025 survey. This is due to age-2 and older fish only comprising 9% of the population. Length frequency and Proportional Stock Density (PSD) metrics are included in Figure 2 and Table 2, respectively. Crappie growth rates remain very good with both white and black crappie averaging greater than 10 inches at age-2 (Table 3, Figure 3). This fast growth will result in much of the population, currently dominated by age-1 individuals, reaching preferred sizes in the coming year.

Mortality estimates (Table 4) for crappie at Durant Lake are highly variable and may not accurately reflect overall mortality rates. Historical stocking records are included in Table 5.

Table 1. Effort, overall fish per net night (CPUE), variability, relative weights (Wr), and CPUE by size groups of crappie collected by trap netting from Durant Lake.

Year	Spp.	Net-nights	# Fish	Total CPUE	Range (U/L 95% CI)	RSE	Net-nights needed RSE = 20	Wr	CPUE < 5 in	CPUE ≥ 5 in	CPUE ≥ 10 in
2010	White Crappie	12	35	3.1	±1.6	26.4	21	91	0.3	2.8	1.5
2010	Black Crappie	12	8	0.7	±0.7	50.7	77	86	-	0.7	0.4
2010	All Crappie Comb.	12	43	3.9	±2.0	25	19	86	0.3	3.5	1.9
2016	White Crappie	12	285	25.1	±11.8	23.9	17	80	5.7	19.5	0.4
2016	Black Crappie	12	12	1.1	±0.8	35.3	37	81	-	1.1	-
2016	All Crappie Comb.	12	297	26.2	±13.3	23.1	16	77	5.7	20.6	0.4
2019	White Crappie	10	77	7.5	±3.9	26.8	18	104	4.6	2.9	2.5
2019	Black Crappie	10	20	1.9	±1.0	26.1	17	96	0.7	1.3	0.7
2019	All Crappie Comb.	10	97	9.4	±5.2	24.1	15	99	5.3	4.2	3.1
2022	White Crappie	12	419	41.2	±18.4	22.8	16	97	0.2	41.0	11.5
2022	Black Crappie	12	125	12.3	±6.4	26.7	21	90	0.5	11.8	0.7
2022	All Crappie Comb.	12	544	53.5	±25.9	22	15	92	0.7	52.8	12.2
2025	White Crappie	11	157	14.4	±5.2	18.3	9	95	0.8	13.6	1.5
2025	Black Crappie	11	55	5.1	±2.8	29.8	24	92	0.4	4.7	0.5
2025	All Crappie Comb.	11	212	19.5	±8.0	18.4	9	91	1.2	18.3	1.9

Figure 1. Fish per net night (CPUE) trend data for all crappie combined and crappie greater than 10 inches collected by trap netting from Durant Lake. Error bars represent standard error estimates.

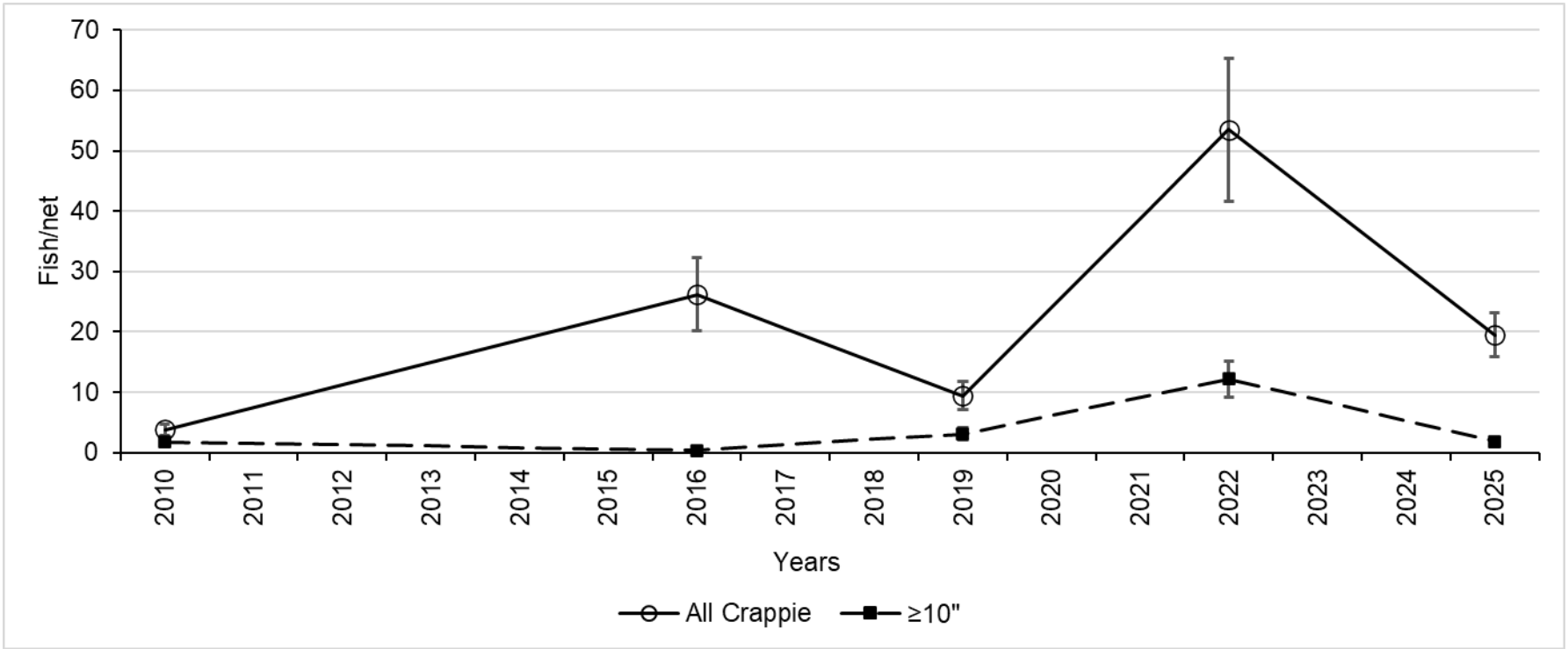


Figure 2. 2025 length frequency distribution for all crappie collected by trap netting at Durant Lake. N = 212.

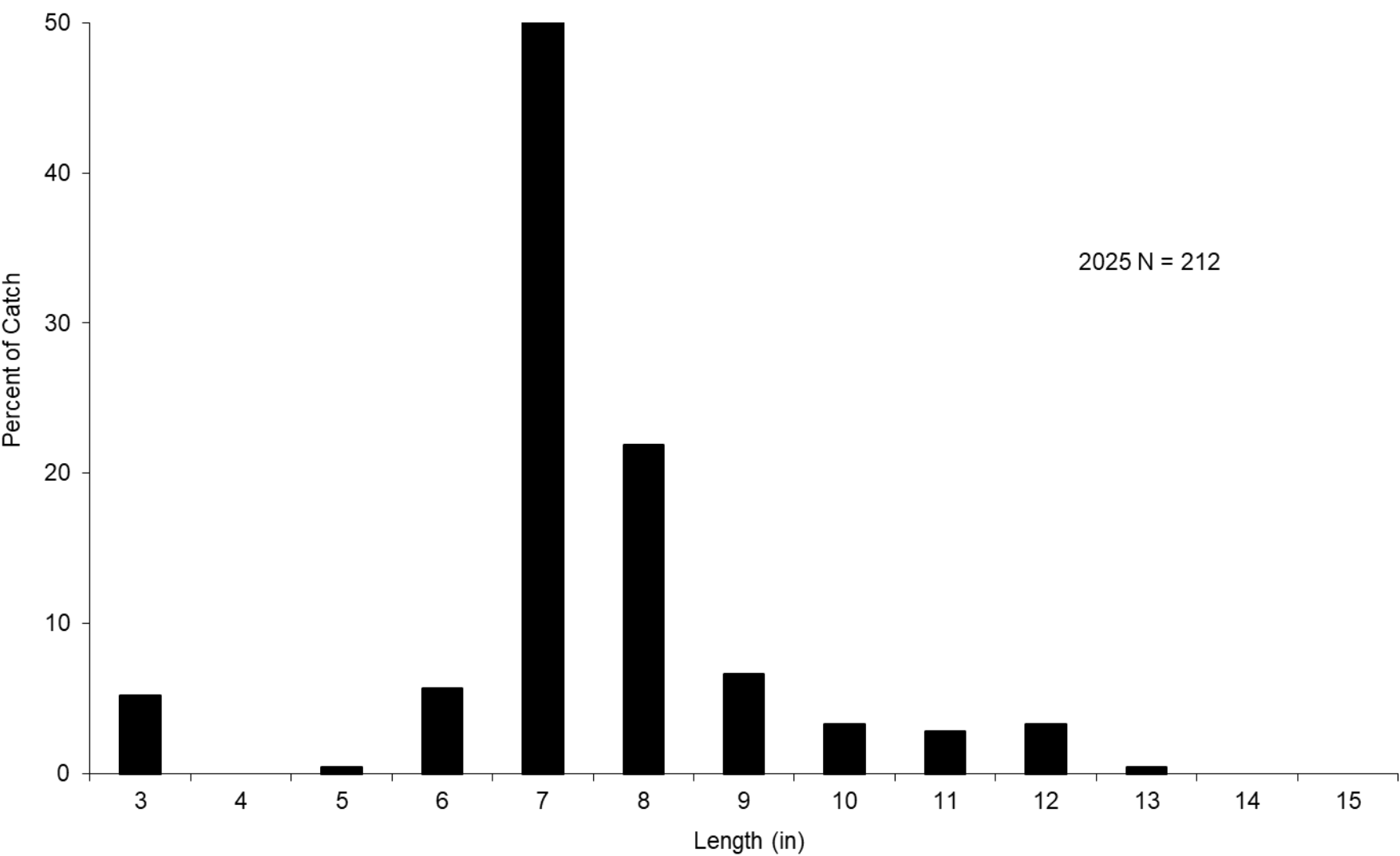


Table 2. Proportional Stock Density (PSD) categories and PSD metrics and variability for crappie collected by trap netting from Durant Lake.

Category	Stock	Quality	Preferred	Memorable	Trophy
Size (in)	5.1	7.9	9.8	11.8	15.0

Year	Spp.	PSD	Range (U/L 95% CI)	PSD-P	Range (U/L 95% CI)	PSD-M	Range (U/L 95% CI)	PSD-T	Range (U/L 95% CI)
2010	White Crappie	74	±22	55	±25	32	±24	-	-
2010	Black Crappie	50	±35	50	±35	-	-	-	-
2016	White Crappie	3	±4	3	±3	2	±3	-	-
2016	Black Crappie	-	-	-	-	-	-	-	-
2019	White Crappie	87	±18	83	±19	23	±22	-	-
2019	Black Crappie	85	±28	54	±39	38	±38	-	-
2022	White Crappie	65	±6	31	±6	1	±1	-	-
2022	Black Crappie	36	±12	8	±6	2	±4	-	-
2025	White Crappie	52	±12	10	±7	6	±5	-	-
2025	Black Crappie	25	±17	12	±12	2	±5	-	-

Table 3. Number of crappie, mean length at age, and variability of crappie collected by trap netting from Durant Lake.

Year	Spp.	# Aged	# Fish with Length-Age Key	Age-1 (N)	Range (U/L 95% CI)	Age-2 (N)	Range (U/L 95% CI)	Age-3 (N)	Range (U/L 95% CI)	Age-4 (N)	Range (U/L 95% CI)
2010	White Crappie	31	31	7.7 (14)	±0.5	11.5 (10)	±0.2	12.5 (6)	±0.4	13.5 (1)	-
2010	Black Crappie	8	8	7.7 (5)	±2.2	10.6 (3)	±0.9	-	-	-	-
2016	White Crappie	94	269	5.3 (260)	±0.1	7.9 (5)	±1.2	12.5 (4)	±0.4	-	-
2016	Black Crappie	12	12	6.3 (12)	±0.3	-	-	-	-	-	-
2019	White Crappie	30	77	10.4 (15)	±0.2	11.6 (6)	±0.8	-	-	13.2 (5)	±0.2
2019	Black Crappie	13	13	8.8 (7)	±0.9	12.0 (4)	±0.4	-	-	13.4 (2)	±0.0
2022	White Crappie	112	417	8.8 (413)	±0.1	-	-	13.4 (3)	±1.0	-	-
2022	Black Crappie	73	120	7.9 (115)	±0.2	13.9 (1)	-	13.1 (2)	±0.7	-	-
2025	White Crappie	87	147	8.0 (135)	±0.1	12.0 (10)	±0.3	-	-	12.9 (2)	±1.4
2025	Black Crappie	41	52	7.4 (46)	±0.2	10.5 (5)	±0.3	12.0 (1)	-	-	-

Figure 3. 2025 Length at age data for crappie collected from Durant Lake by fall trap netting.

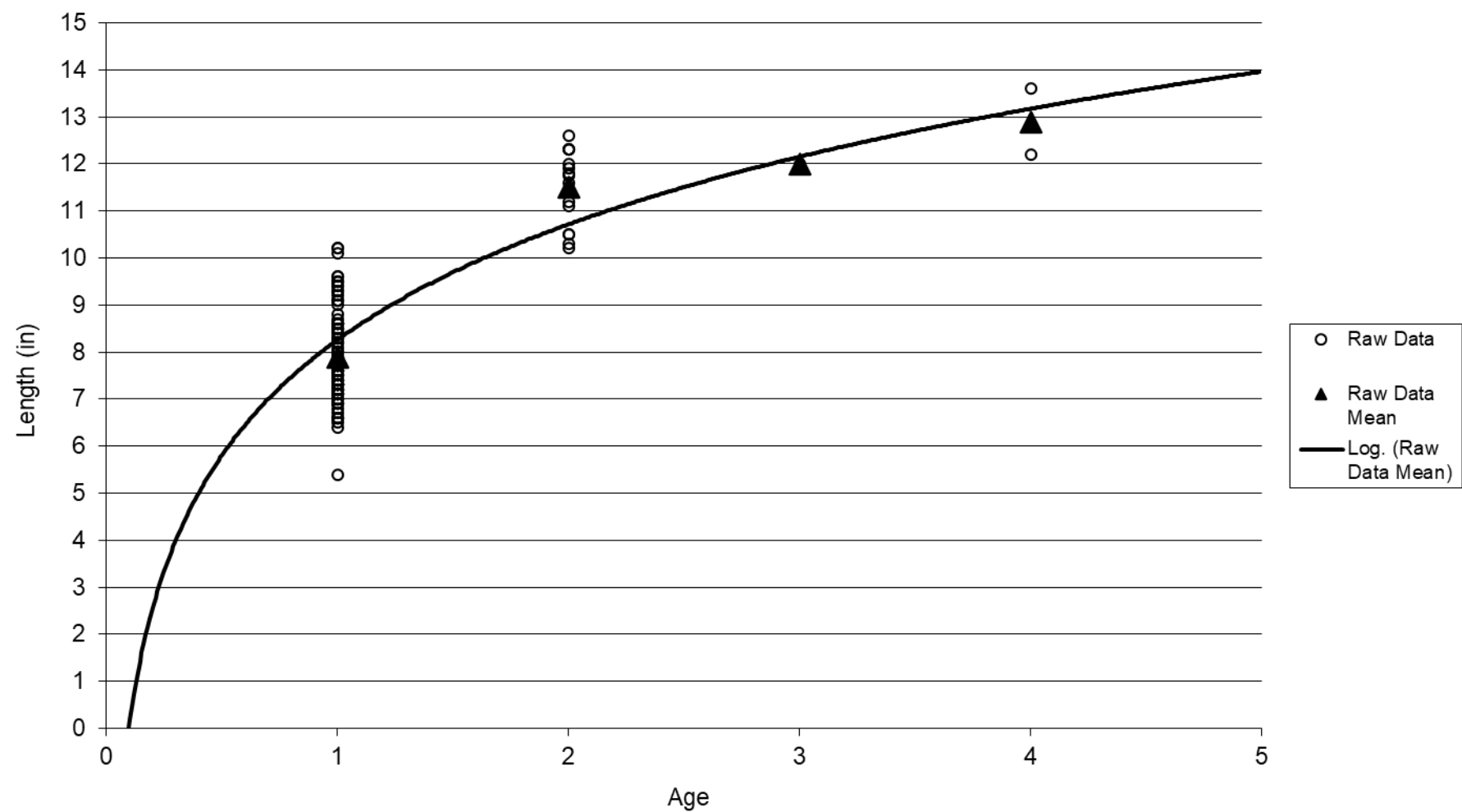


Table 4. Mortality estimates, variability, and maximum observed age of crappie collected by trap netting from Durant Lake.

Year	Spp.	Annual Mortality	Lower 95% CI	Upper 95% CI	Observed Max Age
2010	White Crappie	-	-	-	-
2010	Black Crappie	-	-	-	-
2016	White Crappie	92.09	-9002085	100	3
2016	Black Crappie	-	-	-	1
2019	White Crappie	44.68	-37	78	4
2019	Black Crappie	27.82	-54	66	4
2022	White Crappie	90.17	-	-	3
2022	Black Crappie	95	-9978610	100	3
2025	White Crappie	76.8	-81786	99	4
2025	Black Crappie	83	-608	99	3

Table 5. Species, number and size of fish stocked in Durant Lake.

DATE	SPECIES	NUMBER	SIZE
1993	Channel catfish	30,500	Fingerlings
1993	Bluegill	109,000	Fingerlings
1993	Redear	44,000	Fingerlings
1994	Cert. Florida bass	31,200	Fingerlings
1994	Channel catfish	12,225	Growouts
1994	Bluegill	246,015	Fingerlings
1994	Threadfin shad	2,500	Adults
1995	Threadfin shad	5,050	Adults
1995	Cert. Florida bass	31,000	Fingerlings
1995	Channel catfish	12,225	Fingerlings
1995	Bluegill	150,000	Fingerlings
1996	Threadfin shad	4,740	Adults
1996	Cert. Florida bass	32,330	Fingerlings
1997	Threadfin shad	2,000	Adults
1999	Cert. Florida bass	6,100	Fingerlings
2000	Cert. Florida bass	6,300	Fingerlings
2000	Threadfin shad	3,000	Adults
2000	Channel catfish	12,000	Fingerlings
2002	Threadfin shad	1,500	Adults
2003	Threadfin shad	3,300	Adults
2003	Cert. Florida bass	6,750	Fingerlings
2005	Cert. Florida bass	6,116	Fingerlings
2005	N. largemouth bass	2,500	Fingerlings
2007	N. largemouth bass	10,000	Fingerlings
2011	Cert. Florida bass	30,502	Fingerlings
2011	Cert. Florida bass	55	Adults
2013	Cert. Florida bass	30,000	Fingerlings
2014	Cert. Florida bass	30,448	Fingerlings
2016	Cert. Florida bass	30,016	Fingerlings
2017	Cert. Florida bass	30,021	Fingerlings
2018	Cert. Florida bass	30,325	Fingerlings
2019	Cert. Florida bass	65,416	Fingerlings
2021	Cert. Florida bass	24,860	Fingerlings
2025	Cert. Florida bass	30,281	Fingerlings