

The following supporting information can be downloaded at <https://www.mdpi.com/article/10.3390/fishes10010024/s1>. Table S1: Species composition of fish larvae in the coastal waters of Zhejiang; Table S2: SIMPER analysis table in the station group of fish larvae community in April 2022.; Table S3: SIMPER analysis table in the station group of fish larvae community in November 2022; Table S4: SIMPER analysis table in the station group of fish larvae community in February 2023; Table S5: SIMPER analysis table in the station group of fish larvae community in July 2023. Table S6. Statistical summary of explanatory variables. Table S7. Summary of the Significance of Environmental Variables.

**Table S1.** Species composition of fish larvae in the coastal waters of Zhejiang.

			2022	2023		
code		species	Apr.	Nov.	Feb.	Jul.
Anguilliformes						
Muraenesocidae						
1	★	<i>Muraenesox cinereus</i>		▲		
Clupeiformes						
Pristigasteridae						
2	★	<i>Ilisha elongata</i>				▲
Engraulidae						
3	☆	<i>Coilia mystus</i>		▲		▲
4	☆	<i>Coilia nasus</i>		▲	▲	▲
5	☆	<i>Engraulis japonicus</i>	▲		▲	▲
6	★	<i>Setipinna taty</i>		▲		▲
7	★	<i>Stolephorus commersonnii</i>		▲		▲
8		<i>Stolephorus</i> sp.		▲		▲
Clupeidae						
9	☆	<i>Konosirus punctatus</i>	▲			▲
Osmeriformes						
Osmeridae						

10	☆	<i>Salanx ariakensis</i>		▲	▲	▲
<b>Aulopiformes</b>						
<b>Synodontidae</b>						
11	☆	<i>Harpodon nehereus</i>	▲	▲	▲	▲
<b>Myctophiformes</b>						
<b>Myctophidae</b>						
12	★	<i>Benthosema pterotum</i>	▲	▲		▲
<b>Gadiformes</b>						
<b>Bregmacerotidae</b>						
13	★	<i>Bregmaceros maclellandi</i>				▲
<b>Lophiiformes</b>						
<b>Lophiidae</b>						
14	☆	<i>Lophius litulon</i>	▲			
<b>Mugiliformes</b>						
<b>Mugilidae</b>						
15	☆	<i>Planiliza haematocheilus</i>	▲			▲
16	★	<i>Planiliza affinis</i>	▲			
<b>Beloniformes</b>						
<b>Exocoetidae</b>						
17	★	<i>Hirundichthys oxycephalus</i>				▲
18	★	<i>Cheilopogon doederleinii</i>				▲
<b>Gasterosteiformes</b>						
<b>Syngnathidae</b>						
19	☆	<i>Corythoichthys haematopterus</i>		▲		
20	☆	<i>Syngnathus acus</i>			▲	
<b>Scorpaeniformes</b>						
<b>Scorpaenidae</b>						
21	★	<i>Minous monodactylus</i>	▲			

22	☆	<i>Sebastiscus marmoratus</i>	▲	▲	▲
<b>Triglidae</b>					
23	★	<i>Chelidonichthys spinosus</i>	▲		
24		<i>Lepidotrigla</i> sp.	▲		
<b>Platycephalidae</b>					
25	★	<i>Platycephalus indicus</i>	▲		
<b>Hexagrammidae</b>					
26	●	<i>Hexagrammos otaki</i>			▲
<b>Perciformes</b>					
<b>Lateolabracidae</b>					
27	☆	<i>Lateolabrax japonicus</i>	▲		▲
<b>Apogonidae</b>					
28	☆	<i>Apogon lineatus</i>		▲	▲
<b>Sillaginidae</b>					
29	★	<i>Sillago sihama</i>			▲
<b>Coryphaenidae</b>					
30	☆	<i>Coryphaena hippurus</i>			▲
<b>Carangidae</b>					
31	★	<i>Decapterus maruadsi</i>	▲		▲
32	☆	<i>Trachurus japonicus</i>	▲		▲
33		<i>Carangidae</i> sp.	▲		
<b>Leiognathidae</b>					
34	★	<i>Leiognathus ruconius</i>			▲
35	★	<i>Photopectoralis bindus</i>			▲
<b>Lutjanidae</b>					
36		<i>Lutjanidae</i> sp.			▲
<b>Gerreidae</b>					
37	★	<i>Gerres erythrourus</i>			▲

**Haemulidae**

38	☆	<i>Hapalogenys nigripinnis</i>			▲
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**Sparidae**

39	☆	<i>Acanthopagrus schlegelii</i>	▲		
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40	☆	<i>Pagrus major</i>	▲		
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41		Sparidae sp.	▲		
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**Sciaenidae**

42	★	<i>Argyrosomus japonicus</i>			▲
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43	★	<i>Chrysochir aureus</i>		▲	▲
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44	☆	<i>Collichthys lucidus</i>			▲
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45	★	<i>Johnius belangerii</i>			▲
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46	★	<i>Johnius trewavasae</i>			▲
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47	☆	<i>Larimichthys crocea</i>	▲	▲	
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48	☆	<i>Larimichthys polyactis</i>	▲	▲	▲
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49	☆	<i>Nibea albiflora</i>		▲	▲
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50	★	<i>Pennahia argentata</i>			▲
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51		Sciaenidae sp.		▲	
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**Mullidae**

52	☆	<i>Upeneus japonicus</i>			▲
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**Oplegnathidae**

53	★	<i>Oplegnathus fasciatus</i>			▲
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**Zoarcidae**

54		Zoarcidae sp.	▲	▲	
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**Blenniidae**

55	☆	<i>Omobranchus elegans</i>			▲
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56	☆	<i>Omobranchus punctatus</i>			▲
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57	★	<i>Parablennius yatabei</i>			▲
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58		Petroscirtes sp.			▲
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59		Blenniidae sp.				▲
		<b>Callionymidae</b>				
60	★	<i>Repomucenus olidus</i>	▲			▲
		<b>Eleotridae</b>				
61	★	<i>Butis koilomatodon</i>				▲
62	★	<i>Eleotris fusca</i>		▲		
63		Eleotridae sp.				▲
		<b>Gobiidae</b>				
64	☆	<i>Synechogobius ommaturus</i>	▲		▲	
65	☆	<i>Amblychaeturichthys hexanema</i>	▲	▲	▲	▲
66	☆	<i>Boleophthalmus pectinirostris</i>	▲			▲
67	☆	<i>Chaeturichthys stigmatias</i>	▲		▲	▲
68	☆	<i>Luciogobius guttatus</i>	▲			▲
69	☆	<i>Mugilogobius abei</i>				▲
70	☆	<i>Odontamblyopus lacepedii</i>	▲	▲	▲	▲
71	☆	<i>Oxuderces dentatus</i>				▲
72	☆	<i>Periophthalmus modestus</i>		▲		
73	☆	<i>Tridentiger barbatus</i>	▲	▲		▲
74	☆	<i>Trypauchen vagina</i>			▲	▲
75	☆	<i>Periophthalmus magnuspinnatus</i>				▲
76	☆	<i>Heteroplopomus barbatus</i>				▲
77	☆	<i>Amblyotrypauchen arctocephalus</i>		▲	▲	
78		Gobiidae sp.				▲
		<b>Trichiuridae</b>				
79	☆	<i>Eupleurogrammus muticus</i>				▲
80	☆	<i>Trichiurus lepturus</i>		▲		▲
81	★	<i>Lepturacanthus savala</i>				▲
		<b>Scombridae</b>				

82	★	<i>Auxis rochei</i>						▲
83	★	<i>Scomber japonicus</i>		▲				▲
84	★	<i>Scomberomorus guttatus</i>						▲
85	★	<i>Scomberomorus niphonius</i>		▲				
<b>Centrolophidae</b>								
86	☆	<i>Pampus argenteus</i>		▲			▲	
<b>Pleuronectiformes</b>								
<b>Paralichthyidae</b>								
87	☆	<i>Paralichthys olivaceus</i>		▲				
<b>Soleidae</b>								
88	★	<i>Zebrias japonicus</i>		▲				
<b>Cynoglossidae</b>								
89	☆	<i>Cynoglossus abbreviatus</i>		▲	▲		▲	▲
90	☆	<i>Cynoglossus lighti</i>						▲
91	☆	<i>Cynoglossus semilaevis</i>				▲		
<b>Tetraodontiformes</b>								
<b>Monacanthidae</b>								
92	☆	<i>Stephanolepis cirrifer</i>						▲
<b>Tetraodontidae</b>								
93	☆	<i>Takifugu xanthopterus</i>		▲		▲		▲

**Note:** ★ warm-water species; ☆ warm-temperature species; ● cold-temperate species; ▲ fish larvae and juveniles.

Table S2. SIMPER analysis table in the station group of fish larvae community in April 2022.

species	A		B		C		D	
	As=29.71%		As=32.10%		As=37.02%		As=27.90%	
	A	C%	A	C%	A	C%	A	C%
<i>Engraulis japonicus</i>	15.54	52.31						
<i>Amblychaeturichthys hexanema</i> s	13.9	46.78						
<i>Planiliza haematocheilus</i>			22.07	68.74			1.23	4.41
<i>Sebastiscus marmoratus</i>			9.46	29.46	32.3	87.26	10.9	39.06
<i>Stolephorus commersonnii</i>					2.48	11.35	4.4	15.77

<i>Lateolabrax japonicus</i>	4.32	15.48
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**Table S3.** SIMPER analysis table in the station group of fish larvae community in November 2022.

species	A		B		C	
	As=32.63%		As=68.66%		As=33.72%	
	A	C%	A	C%	A	C%
<i>Trichiurus lepturus</i>	32.63	100				
<i>Harpodon nehereus</i>			68.66	100		
<i>Larimichthys crocea</i>					31.03	92.02

**Table S4.** SIMPER analysis table in the station group of fish larvae community in February 2023.

species	A		B		C	
	As=70.65%		As=41.75%		As=44.05%	
	A	C%	A	C%	A	C%
<i>Salanx ariakensis</i>	68.69	97.24				
<i>Lateolabrax japonicus</i>			39.17	93.82		
<i>Sebastiscus marmoratus</i>					43.25	98.18

**Table S5.** SIMPER analysis table in the station group of fish larvae community in July 2023.

[illegible]

**Table S6.** Statistical summary of explanatory variables.

Variable	Description	Range (Mean)			
		2022		2023	
		4	11	2	7
Depth	Water depth	6.24~61.20	8.07~51.96	5.09~56.96	4.42~60.47
	(m)	(20.709)	(25.88)	(24.44)	(26.27)
SST	Sea surface temperature	13.97~19.18	18.04~23	7.45~12.49	22.47~30.03
	(°C)	(16.159)	(20.012)	(9.69)	(26.05)
SSS	Sea surface salinity	10.668~30.808	19.07~34.2	21.38~34.05	13.42~34.08
		(24.897)	(29.58)	(28.68)	(28.17)
Chl.a	Chlorophyll a	0.39~30.229	0.27~70.86	0.03~94.71	0.019~60.56
	(µg/L)	(4.12)	(9.57)	(6.63)	(4.73)
Turb.	turbidity	0.28~434.22	1.55~657.41	1.56~705.13	0.01~285.85
		(41.51)	(80.28)	(88.79)	(8.62)
pH	Potential of hydrogen	8.72~9.44	8.03~8.15	7.59~8.97	8.05~9.25
		(9.12)	(8.07)	(8.42)	(8.62)
DO	Dissolved oxygen	7.57~9.90	6.47~8.93	8.12~10.48	5.40~10.30
	(mg/L)	(8.92)	(7.88)	(9.58)	(7.00)

**Table S7.** Summary of the Significance of Environmental Variables.

Season	Mantel test		Permutation test	
	Significant	Highly Significant	Significant	Highly Significant
Spring	SST, Chl.a, Turb.	SSS, pH, DO	Turb.	SST, SSS, Chl.a, DO
Autumn		Depth, SST, SSS		Depth, SST, SSS, Chl.a
Winter	SSS, Ph	DO		Depth, SST, SSS
Summer		Depth, SST, SSS		Depth, SST, SSS, DO