

review article  
received: 2004-11-14

UDC 597.5:591.134(262-18)

## LENGTH-WEIGHT RELATIONSHIPS OF FISHES FROM TURKISH SEAS: A REVIEW

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### ABSTRACT

*The paper presents 360 length-weight relationships gathered from available literature pertaining to 90 fish species belonging to 40 families occurring throughout Turkish seas. The value of the slope  $b$  ranged from 0.409 for *Thunnus thynnus* to 4.343 for *Dentex macrophthalmus*. The mean value of  $b$  was 3.088 ( $\pm$  SD = 0.898) and did not differ significantly from 3 (t-test,  $p < 0.05$ ). The median value of  $b$  was 3.062 and 50% of  $b$  values ranged between 2.941 and 3.190.*

**Key words:** length-weight relationship, fishes, Turkish seas, review

## RAPPORTO PESO/LUNGHEZZA DEI PESCI NEI MARI DELLA TURCHIA: UNA RASSEGNA

### SINTESI

*Sulla base dei dati messi a disposizione dall'attuale letteratura, l'articolo elenca 360 esempi di rapporto peso/lunghezza di pesci appartenenti a 90 specie e 40 famiglie che dimorano nei mari della Turchia. La curva ( $b$ ) va dallo 0,409 della specie *Thunnus thynnus* al 4,343 di quella del *Dentex macrophthalmus*. Il valore medio di  $b$  è 3,088 ( $\pm$  SD = 0,898) e si discosta pochissimo dal 3 (t-test,  $p < 0,05$ ). La mediana del coefficiente  $b$  è di 3,062, mentre il 50 % del valore di  $b$  oscilla tra 2,941 e 3,190.*

**Parole chiave:** rapporto peso/lunghezza, pesci, mari della Turchia, rassegna

## INTRODUCTION

Recording length and weight data is a standard procedure of fish sampling programs. Such data are essential for studies of fish population dynamics. Length-weight relationships have a number of uses including: (a) the estimation of standing-crop biomass when the length-frequency distribution is known; (b) estimation of biomass from length observations because of technical difficulties (e.g. bobbing motion of the boat) and the amount of time required to record weight in the field; (c) the calculation of condition indexes in the analysis of ontogenetic changes; and (d) comparing the life stories and morphological variations of fish populations from different regions (Cailliet *et al.*, 1986; Safran, 1992; Petrakis & Stergiou, 1995; Goncalves *et al.*, 1996; Martin-Smith, 1996; Morato *et al.*, 2001; Stergiou & Motopoulos, 2001; Filiz & Bilge, 2004).

In this review, we gathered 336 length-weight relationships from the available literature for 70 fish species from Turkish seas.

## MATERIAL AND METHODS

All length-weight relationships presented here are the product of field studies conducted during 1972–2004 in Turkish seas. For the majority of the original length-weight relationship ( $W=aL^b$ ), length was expressed in cm and weight in g (356 relationships out of 360; 98.8%), whereas for 4 (1.2%) relationships, length and weight were expressed in mm and g.

## RESULTS AND DISCUSSION

Overall, 360 length-weight relationships, gathered from the literature, represent 90 species and 40 families occurring in Turkish marine waters (Tab. 1). Overall, 50 out of the 360 length-weight relationships refer to *Merluccius merluccius* (14.9%), 35 (10.4%) to *Mullus barbatus*, and 26 (7.7%) to *Pagellus erythrinus*, three of the most commercially important demersal species in Turkish seas. Regarding the number of studies, of which length-weight relationship of an individual family is recorded, Sparidae dominated the overall records (84, 25.0%), and followed by Mullidae (60, 17.9%), Merluccidae (50, 14.9%), Engraulidae (17, 5.1%) and Mugilidae (14, 4.2%). Each of the remaining 28 families was represented by less than one relationship.

The value of the slope  $b$  in the plot of  $\log W$  against  $\log L$  ranged from 0.409 for *Thunnus thynnus* in Aegean and Mediterranean Sea to 4.343 for *Dentex mac-*

*rophthalmus* in Saros Bay. The mean value of  $b$  was 3.088 ( $\pm$  SD = 0.8985) and did not differ significantly from 3 ( $t$ -test,  $p < 0.05$ ). The median value of  $b$  was 3.062 and 50 % of  $b$  values ranged between 2.941 and 3.19.

According to Stergiou & Moutopoulos (2001), a plot of  $a$  versus  $b$  for all known length-weight relationships of a species results in a linear relationship, and this relationship can be used to identify outliers. We have applied this method to all species with more than 10 length-weight relationships. This led to the detection of outliers, where the respective point deviated more than two standard deviations from the regression line. These length-weight relationships were marked as "questionable" in Table 1.

The length-weight relationship in fishes is affected by a number of factors, including season, habitat, gonad maturity, sex, diet and stomach fullness, health and preservation techniques (Dulčić & Kraljević, 1996), all of which were not accounted for in this review. As stressed by Bagenal & Tesch (1978) and Petrakis & Stergiou (1995), the use of relationships should be limited to the size range used to estimate the parameters. Extrapolation to juvenile or immature stages may be particularly unwise given the potential differences in growth patterns between adults and earlier life history stages (Bagenal & Tesch, 1978). The parameters of the length-weight relationship may vary significantly according to season, habitat and even on a daily basis (*ibid*). In fishes, size is generally more biologically relevant than age, mainly because several ecological and physiological factors are more size-dependent than age-dependent (Dulčić & Kraljević, 1996). Consequently, variability in size has important implications for diverse aspects of fisheries science and population dynamics. Length-weight relationships have several applications, namely on fish biology, physiology, ecology and fisheries assessment. In biological studies, length-weight relationships enable seasonal variations in fish growth to be followed and the calculation of condition indexes. In fisheries studies, length-weight relationships have many different uses, including the estimation of weight from length, the estimation of weight-at-age and the conversion of growth-in-length equations to growth-in-weight. The establishment of length-weight relationships is also fundamental for the calculation of production and biomass of a fish population, being very useful for biomass estimations based on visual census of fish populations.

This review of length-weight parameters reported here will be of considerable use in ongoing studies of the catch in Turkish commercial fisheries.

**Tab. 1: Parameters of the length-weight relationship  $W = aL^b$  of fish species from Turkish marine waters (length (cm), weight (g)).**

**Legend:** Sex (M, male; F, female; C, combined; U, unidentified); Year = year of sampling; S = sampling season (AUT, Autumn; WI, Winter; SP, Spring; SU, Summer; C, All seasons); L = length (TL, Total length; FL, Fork length; SL, Standard length); a = intercept (from the literature); b = slope (of the relationship  $W=aL^b$ );  $r^2$  = coefficient of correlation; N = sampling size; min and max = minimum and maximum sample lengths (cm); SD = standard deviation.

Species are listed in alphabetical order.

**Tab. 1: Parametri razmerja  $W = aL^b$  med dolžino in težo ribjih vrst, živečih v turških morjih (dolžina (cm), teža (g)).**

**Legenda:** Sex = spol (M, samec; F, samica; C, oba skupaj; U, neidentificiran); Year = leto vzorčenja; S = sezona vzorčenja (AUT, jesen; WI, zima; SP, pomlad; SU, poletje; C, vse sezone); L = dolžina (TL, celotna dolžina; FL, dolžina razcepa repa; SL, standardna dolžina); a = presečišče (na podlagi virov); b = naklon (iz razmerja  $W=aL^b$ );  $r^2$  = korelacijski koeficient; N = število primerkov; min in max = najmanjše in največje vzorčevalne velikosti (cm); SD = standardni odklon.

Vrste so navedene v abecednem redu.

Species	Area	Sex	Year	S	L	a	b	$r^2$	N	mean	min	max	SD	Source
<i>Alosa</i> sp.	Black Sea	C	1988–94	C	TL	0.0081	3.103	0.921*	65	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Arnoglossus laterna</i>	İzmir Bay	C	1996–97	C	TL	0.00932	2.897	0.940	643	12.1	6.0	15.3	–	Mater & Bayhan (2000)
<i>Argentina sphyraena</i>	Sigacik trawl area	C	2003	C	TL	0.0062	2.93	0.93	238	–	7.5	20.7	–	Filiz & Bilge (2004)
<i>Atherina hepsetus</i>	Eceabat Dardanelles	C	1997–99	C	FL	0.01287	2.890	0.999	564	–	5.8	13.0	–	Altun (2000)
<i>Belone belone</i>	Black Sea	C	1988–94	C	TL	0.0005	3.203	0.940*	65	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Belone belone euxini</i>	Black Sea	C	1995–96	C	TL	0.00055	3.177	0.940*	643	37.55	31.2	52.2	0.17	Samsun (1995)
<i>Capros aper</i>	Yeşilova Bay	F	1992	SU	TL	0.0000294	2.912	0.883*	170	86.35	–	–	0.7	Kaya & Ozaydın (1996)
<i>Capros aper</i>	Yeşilova Bay	M	1992	SU	TL	0.0000204	2.915	0.883*	165	84.72	–	–	0.6	Kaya & Ozaydın (1996)
<i>Capros aper</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0232	2.83	0.98	455	–	2.9	10.1	–	Filiz & Bilge (2004)
<i>Cepola rubescens</i>	İzmir Bay	F	1996–97	C	TL	0.32388	1.269	0.792	131	34.43	11.5	45.6	6.76	Kaya <i>et al.</i> (2001)
<i>Caelorinchus caelorinchus</i>	Sigacik trawl area	C	2003	C	TL	0.0065	2.74	0.78	208	–	4.0	21.6	–	Filiz & Bilge (2004)
<i>Cepola rubescens</i>	İzmir Bay	M	1996–97	C	TL	0.2154	1.384	0.810	144	29.17	19.8	47.1	6.26	Kaya <i>et al.</i> (2001)
<i>Chelidonichthyes lucerna</i>	İskenderun Bay	F	1999–00	C	TL	0.0095	2.990	0.960*	199	–	8.0	30.3	–	Ismen <i>et al.</i> (2004)
<i>Chelidonichthyes lucerna</i>	İskenderun Bay	M	1999–00	C	TL	0.0089	3.010	0.980*	143	–	8.3	21.2	–	Ismen <i>et al.</i> (2004)
<i>Chelon labrosus</i>	Güllük Lagoon	C	1993–94	C	TL	0.0075539	3.067	0.962*	45	26.4	20.0	35.0	3.5	Hossucu (2001)
<i>Chlorophthalmus agassizi</i>	Sigacik trawl area	C	2003	C	TL	0.0027	3.37	0.98	378	–	7.7	17.5	–	Filiz & Bilge (2004)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Chimaera monstrosa</i>	Sigacik trawl area	C	2003	C	TL	0.0028	2.82	0.98	17	–	13.1	75.3	–	Filiz & Bilge (2004)
<i>Conger conger</i>	Sigacik trawl area	C	2003	C	TL	0.0005	3.24	0.96	22	–	32.2	65.4	–	Filiz & Bilge (2004)
<i>Dasyatis pastinaca</i>	İskenderun Bay	F	1999–00	C	TL	0.00091	3.440	0.940	110	–	20.5	88.0	–	Ismen (2003)
<i>Dasyatis pastinaca</i>	İskenderun Bay	M	1999–00	C	TL	0.00237	3.170	0.950	146	–	20.0	73.0	–	Ismen (2003)
<i>Dasyatis pastinaca</i>	İskenderun Bay	C	1999–00	C	TL	0.00144	3.310	0.940	256	–	20.0	88.0	–	Ismen (2003)
<i>Dasyatis pastinaca</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0149	2.81	0.85	29	–	37.3	74.2	–	Filiz & Bilge (2004)
<i>Dentex dentex</i>	İskenderun Bay	C	2000	AUT	TL	0.0861	2.495	0.921	16	42.41	31.40	51.0	6.35	Can <i>et al.</i> (2000)
<i>Dentex gibbosus</i>	İskenderun Bay	C	2000	AUT	TL	0.0341	2.714	0.857	34	27.29	17.68	47.3	6.83	Can <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Saros Bay	C	1991	SU	TL	0.01760	3.071	0.864*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	İzmir Bay	C	1991	SU	TL	0.02248	2.966	0.889*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Güllük Bay	C	1991	SU	TL	0.00782	3.292	0.974*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Gökova Bay	C	1991	SU	TL	0.02404	2.932	0.874*	60	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Saros Bay	C	1992	WI	TL	0.01974	3.027	0.988*	12	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Saros Bay	C	1992	SP	TL	0.00002	4.343	0.980*	58	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Gökova Bay	C	1992	SP	TL	0.01280	3.107	0.970*	40	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Gökova Bay	C	1993	SP	TL	0.01731	3.084	0.986*	46	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	İzmir Bay	C	1993	AUT	TL	0.02968	2.859	0.975*	9	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Güllük Bay	C	1993	AUT	TL	0.02946	2.812	0.974*	10	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Gökova Bay	C	1993	AUT	TL	0.02117	2.977	0.978*	82	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Dentex macrophthalmus</i>	Aegean Sea	F	1991–93	C	FL	0.01308	3.171	0.955*	285	14.10	8.2	22.0	0.18	Ozaydın (1997)
<i>Dentex macrophthalmus</i>	Aegean Sea	M	1991–93	C	FL	0.00921	3.282	0.941*	203	14.65	8.2	22.0	0.37	Ozaydın (1997)
<i>Dentex macrophthalmus</i>	Aegean Sea	C	1991–93	C	FL	0.01191	3.198	0.941*	507	14.23	7.8	22.0	0.20	Ozaydın (1997)
<i>Dentex macrophthalmus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000099	3.143	0.962*	87	–	10.7	19.5	–	Anonymus (1993)
<i>Diplodus annularis</i>	Edremit Bay	F	1997–98	C	FL	0.0367	2.797	0.865*	322	10.33	7.3	13.8	0.57	Koc <i>et al.</i> (2002)
<i>Diplodus annularis</i>	Edremit Bay	M	1997–98	C	FL	0.0455	2.696	0.846*	330	10.18	8.0	14.0	0.55	Koc <i>et al.</i> (2002)
<i>Diplodus annularis</i>	İzmir Bay	C	1997–99	C	FL	0.014	3.190	–	160	–	7.8	15.6	–	Kınacıgil & Akyol (2001)
<i>Diplodus annularis</i>	İzmir Bay	F	1997–99	C	FL	0.018	3.090	–	72	–	–	–	–	Kınacıgil & Akyol (2001)
<i>Diplodus annularis</i>	İzmir Bay	M	1997–99	C	FL	0.012	3.260	–	68	–	–	–	–	Kınacıgil & Akyol (2001)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Diplodus annularis</i>	Çandarlı Bay	C	1992	WI	TL	0.04792	2.643	0.886*	24	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus annularis</i>	Güllük Bay	C	1992	WI	TL	0.02056	3.016	0.957*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus annularis</i>	Güllük Bay	C	1993	SP	TL	0.02791	2.926	0.945*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus annularis</i>	Çandarlı Bay	C	1993	AUT	TL	0.01509	3.187	0.927*	36	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus annularis</i>	İzmir Bay	C	1993	AUT	TL	0.01449	3.196	0.931*	32	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus annularis</i>	Gökova Bay	C	1993	AUT	TL	0.09692	2.473	0.893*	18	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus annularis</i>	Gülbahçe Bay	C	1996–1997	C	FL	0.021	3.023	0.961	205		6.5	15.0	–	Tosunoglu <i>et al.</i> (1997)
<i>Diplodus annularis</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.0000050	3.299	0.929*	214	–	8.7	17.3	–	Anonymus (1993)
<i>Diplodus annularis</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000248	2.959	0.895*	381	–	8.4	15.4	–	Anonymus (1993)
<i>Diplodus annularis</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000327	2.905	0.918*	193	–	8.2	19.3	–	Anonymus (1993)
<i>Diplodus annularis</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000102	3.150	0.976*	104	–	9.1	16.6	–	Anonymus (1993)
<i>Diplodus sargus</i>	İskenderun Bay	C	2000	AUT	TL	0.0342	2.807	0.850	33	19.29	14.90	26.7	2.94	Can <i>et al.</i> (2000)
<i>Diplodus vulgaris</i>	Saros Bay	C	1992	WI	TL	0.02840	2.929	0.943*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus vulgaris</i>	İzmir Bay	C	1993	AUT	TL	0.02413	2.983	0.952*	35	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Diplodus vulgaris</i>	İskenderun Bay	C	2000	AUT	TL	0.0131	3.124	0.933	105	16.66	13.20	27.0	2.36	Can <i>et al.</i> (2000)
<i>Diplodus vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000334	2.929	0.943*	20	–	12.1	17.5	–	Anonymus (1993)
<i>Diplodus vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.000365	2.908	0.992*	20	–	10.5	18.9	–	Anonymus (1993)
<i>Diplodus vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000680	2.795	0.984*	11	–	8.8	16.7	–	Anonymus (1993)
<i>Diplodus vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000016	3.538	0.960*	18	–	13.0	18.0	–	Anonymus (1993)
<i>Dipturus oxyrinchus</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0007	3.40	0.99	8	–	17.9	62.2	–	Filiz & Bilge (2004)
<i>Engraulis encrasicolus</i>	Eastern Black Sea	C	2001–02	WI	SL	0.032	2.507	0.895	50	10.48	9.45	11.7	0.066	Aka (2003)
<i>Engraulis encrasicolus</i>	Mid Black Sea	C	2001–02	WI	SL	0.0214	2.673	0.913	50	10.04	8.75	11.35	0.088	Aka (2003)
<i>Engraulis encrasicolus</i>	Western Black Sea	C	2001–02	WI	SL	0.0111	2.979	0.865	50	10.28	9.35	11.05	0.061	Aka (2003)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Engraulis encrasicolus</i>	Marmara Sea	C	2001–02	WI	SL	0.0094	2.999	0.942	50	11.34	10.5	12.1	0.060	Aka (2003)
<i>Engraulis encrasicolus</i>	İzmir Bay	C	2001–02	WI	SL	0.0102	2.937	0.852	50	10.34	9.5	11.2	0.049	Aka (2003)
<i>Engraulis encrasicolus</i>	Edremit Bay	C	2001–02	WI	SL	0.009	2.991	0.866	50	10.14	9.15	11.45	0.062	Aka (2003)
<i>Engraulis encrasicolus</i>	Eastern Black Sea	F	1997–98	–	TL	0.0054	3.040	0.891	907	11.71	8.8	13.8	3.42	Gözler & Ciloglu (1998)
<i>Engraulis encrasicolus</i>	Eastern Black Sea	M	1997–98	–	TL	0.0049	3.071	0.640	339	11.68	8.8	13.8	1.74	Gözler & Ciloglu (1998)
<i>Engraulis encrasicolus</i>	Eastern Black Sea	C	1997–98	–	TL	0.0057	3.015	0.855	1664	11.22	7.0	13.8	4.43	Gözler & Ciloglu (1998)
<i>Engraulis encrasicolus</i>	Eastern Black Sea	C	1996–97	–	TL	0.00569	3.117	–	–	–	6.2	13.5	–	Kayalı (1998)
<i>Engraulis encrasicolus</i>	Eastern Black sea	C	1993–94	–	TL	0.0051	3.048	–	–	10.43	–	–	–	Düzgünes <i>et al.</i> (1995)
<i>Engraulis encrasicolus</i>	Black Sea	C	1988–94	C	TL	0.0053	3.038	0.941*	43	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Engraulis encrasicolus</i>	Black Sea	C	–	–	–	0.0047	3.100	–	–	–	–	–	–	Ozdamar <i>et al.</i> (1991a)
<i>Engraulis encrasicolus</i>	Black Sea	C	–	–	–	0.023	3.412	–	–	–	–	–	–	Ozdamar <i>et al.</i> (1991b)
<i>Engraulis encrasicolus</i>	Black Sea	C	–	–	–	0.0025	3.388	–	–	–	–	–	–	Karacam & Düzgünes (1990)
<i>Engraulis encrasicolus</i>	Black Sea	C	1987–88	–	TL	–2.5941	3.386	–	956	9.34	6.66	15.25	–	Düzgünes & Karacam (1989)
<i>Engraulis encrasicolus</i>	Black Sea	C	1988–89	C	TL	0.00643	2.974	–	1172	–	75	130	–	Unsal (1989)**
<i>Epinephelus costae</i>	İskenderun Bay	C	2000	AUT	TL	0.0885	2.391	0.930	53	29.76	14.20	55.4	8.78	Can <i>et al.</i> (2000)
<i>Gadus euxinus</i>	Eastern Black Sea	C	–	–	–	0.0272	2.573	–	–	–	–	–	–	Düzgünes & Karacam (1990)
<i>Gadus merlangus euxinus</i>	Black Sea	C	1995–96	C	TL	0.0039	3.238	0.931	1302	14.53	9.0	24.0	0.07	Samsun & Erkoyuncu (1998)
<i>Gadus merlangus euxinus</i>	Black Sea	C	1988–94	C	TL	0.0034	3.299	0.922*	54	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Gadus merlangus euxinus</i>	Mid Black Sea	C	–	C	–	0.0043	3.195	–	–	–	–	–	–	Samsun <i>et al.</i> (1993)
<i>Gadiculus argenteus argenteus</i>	Sigacik trawl area	C	2003	C	TL	0.0056	3.24	0.89	110	–	6.4	10.5	–	Filiz & Bilge (2004)
<i>Gymnura alatvela</i>	Sigacik trawl area	C	2003	C	TL	0.0268	2.96	0.98	9	–	37.5	72.0	–	Filiz & Bilge (2004)
<i>Helicolenus dactylopterus</i>	Sigacik trawl area	C	2003	C	TL	0.0079	3.28	0.92	178	–	5.5	13.5	–	Filiz & Bilge (2004)
<i>Hoplostethus mediterraneus</i>	Sigacik trawl area	C	2003	C	TL	0.0149	2.95	0.98	137	–	8.0	18.0	–	Filiz & Bilge (2004)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Lesueurigobius friessi</i>	Sigacik trawl area	C	2003	C	TL	0.0392	2.13	0.72	17	–	6.2	8.1	–	Filiz & Bilge (2004)
<i>Lepidopus caudatus</i>	Sigacik trawl area	C	2003	C	TL	0.0004	3.11	0.99	40	–	21.9	81.5	–	Filiz & Bilge (2004)
<i>Liza ramada</i>	Güllük Lagoon	C	1993–94	C	TL	0.0066894	3.052	0.946*	86	23.5	17.0	33.8	2.8	Hossucu (2001)
<i>Liza saliens</i>	Güllük Lagoon	C	1993–94	C	TL	0.008859	2.997	0.965*	38	25.3	18.3	39.0	3.7	Hossucu (2001)
<i>Liza saliens</i>	İzmir Bay	U	1997–98	C	FL	0.0082	3.090	0.990	15	–	8.4	19.6	3.29	Akyol (1999)
<i>Liza saliens</i>	İzmir Bay	F	1997–98	C	FL	0.0088	3.080	0.953	294	–	13.4	33.1	–	Akyol (1999)
<i>Liza saliens</i>	İzmir Bay	M	1997–98	C	FL	0.0079	3.120	0.986	121	–	13.2	28.7	–	Akyol (1999)
<i>Liza saliens</i>	İzmir Bay	C	1997–98	C	FL	0.0078	3.120	0.985	430	–	8.4	33.1	–	Akyol (1999)
<i>Macroramphosus scolopax</i>	Sigacik trawl area	C	2003	C	TL	0.0079	3.28	0.92	43	–	7.1	11.4	–	Filiz & Bilge (2004)
<i>Merlangius merlangus euxinus</i>	Black Sea	F	1990–93	C	–	0.0040	3.250	0.980*	4176	–	–	–	–	Işmen (2002)
<i>Merlangius merlangus euxinus</i>	Black Sea	M	1990–93	C	–	0.0044	3.220	0.980*	3181	–	–	–	–	Işmen (2002)
<i>Merlangius merlangus euxinus</i>	Eastern Black Sea	F	1997	C	–	0.004856	3.151	–	1349	–	–	–	–	Sahin & Akbulut (1997)
<i>Merlangius merlangus euxinus</i>	Eastern Black Sea	M	1997	C	–	0.005450	3.110	–	864	–	–	–	–	Sahin & Akbulut (1997)
<i>Merlangius merlangus euxinus</i>	Eastern Black Sea	C	1990	C	–	0.0070	3.007	–	–	–	–	–	–	Uysal (1990)
<i>Merluccius merluccius</i>	Saros Bay	C	1991	SU	TL	0.00669	3.013	0.736*	275	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1991	SU	TL	0.00933	2.617	0.64*	78	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1991	SU	TL	0.01038	2.862	0.674*	53	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1991	SU	TL	0.00732	2.977	0.681*	203	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1992	WI	TL	0.00382	3.221	0.960*	74	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1992	WI	TL	0.00507	3.097	0.986*	156	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1992	WI	TL	0.00383	3.188	0.995*	35	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1992	WI	TL	0.00573	3.025	0.997*	21	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1992	SP	TL	0.00297	3.164	0.960*	170	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1992	SP	TL	0.00572	3.029	0.941*	73	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1992	SP	TL	0.00670	3.101	0.980*	9	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1992	SP	TL	0.00570	3.050	0.960*	68	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1993	SP	TL	0.00297	3.075	0.970*	60	–	–	–	–	Benli <i>et al.</i> (2000)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1993	SP	TL	0.00561	3.069	0.991*	35	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1993	SP	TL	0.00665	3.037	0.903*	37	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Güllük Bay	C	1993	SP	TL	0.00291	3.257	0.943*	17	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1993	SP	TL	0.00618	3.049	0.983*	51	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1993	AUT	TL	0.00642	3.028	0.997*	76	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1993	AUT	TL	0.00312	3.266	0.989*	68	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1993	AUT	TL	0.00432	3.175	0.986*	58	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Güllük Bay	C	1993	AUT	TL	0.00731	3.017	0.993*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1993	AUT	TL	0.00396	3.173	0.977*	26	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1991	SU	TL	0.00669	3.013	0.736*	275	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1991	SU	TL	0.00933	2.617	0.640*	78	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1991	SU	TL	0.01038	2.862	0.674*	53	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1991	SU	TL	0.00732	2.977	0.681*	203	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1992	WI	TL	0.00382	3.221	0.960*	74	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1992	WI	TL	0.00507	3.097	0.986*	156	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1992	WI	TL	0.00383	3.188	0.995*	35	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1992	WI	TL	0.00573	3.025	0.997*	21	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1992	SP	TL	0.00297	3.167	0.960*	170	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1992	SP	TL	0.00572	3.029	0.941*	73	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1992	SP	TL	0.00670	3.014	0.980*	9	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1992	SP	TL	0.00570	3.050	0.960*	68	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1993	SP	TL	0.00572	3.075	0.970*	60	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1993	SP	TL	0.00561	3.069	0.991*	35	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1993	SP	TL	0.00665	3.037	0.903*	37	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Güllük Bay	C	1993	SP	TL	0.00291	3.257	0.943*	17	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1993	SP	TL	0.00618	3.049	0.983*	51	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Saros Bay	C	1993	AUT	TL	0.00642	3.028	0.977*	76	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Çandarlı Bay	C	1993	AUT	TL	0.00312	3.266	0.989*	68	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	İzmir Bay	C	1993	AUT	TL	0.00432	3.175	0.983*	58	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Güllük Bay	C	1993	AUT	TL	0.00731	3.017	0.993*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Gökova Bay	C	1993	AUT	TL	0.00396	3.173	0.977*	26	–	–	–	–	Benli <i>et al.</i> (2000)



Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Merluccius merluccius</i>	Aegean Sea	C	1994-95	C	TL	0.0045	3.194	0.974*	336	-	13.6	43.5	-	Uckun <i>et al.</i> (2000)
<i>Merluccius merluccius</i>	Edremit Bay	C	1996-97	-	TL	0.0095	2.928	0.960*	165	-	15.8	37.2	-	Torcu <i>et al.</i> (1997)
<i>Merluccius merluccius</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	SU	FL	0.0000048	3.065	0.984*	1164	-	10.5	69.5	-	Anonymus (1993)
<i>Merluccius merluccius</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	AUT	FL	0.0000037	3.117	0.990*	1114	-	7.8	73.5	-	Anonymus (1993)
<i>Merluccius merluccius</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	WI	FL	0.0000043	3.090	0.988*	614	-	14.2	79.0	-	Anonymus (1993)
<i>Merluccius merluccius</i>	İzmir Bay	C	1989	AUT	FL	0.00246	2.960	-	74	26.10	20.50	36.14	-	Kara & Gurbet (1990)
<i>Mugil cephalus</i>	Güllük Lagoon	C	1993-94	C	TL	0.008198	3.048	0.976*	132	31.0	17.6	46.2	6.6	Hossucu (2001)
<i>Mugil cephalus</i>	İzmir Bay	U	1997-98	C	FL	0.0149	2.950	0.998	29	-	10.2	45.3	-	Akyol (1999)
<i>Mugil cephalus</i>	İzmir Bay	F	1997-98	C	FL	0.0075	3.160	0.989	98	-	25.7	54.5	-	Akyol (1999)
<i>Mugil cephalus</i>	İzmir Bay	M	1997-98	C	FL	0.0109	3.040	0.965	77	-	28.2	55.5	-	Akyol (1999)
<i>Mugil cephalus</i>	İzmir Bay	C	1997-98	C	FL	0.0101	3.070	0.991	204	-	10.2	55.5	-	Akyol (1999)
<i>Mugil so-ıuy</i>	Eastern Black Sea	C	1995	C	TL	0.010	2.980	0.970*	174	-	22.5	68.9	-	Başçınar & Okumus (1997)
<i>Mugil sp.</i>	Black Sea	C	1988-94	C	TL	0.0068	3.077	0.980*	75	-	-	-	-	Erkoyuncu <i>et al.</i> (1994)
<i>Mullus barbatus</i>	İzmir Bay	C	1997	WI	FL	0.0071	3.290	-	221	-	10.3	19.1	-	Kınacıgil <i>et al.</i> (2001)
<i>Mullus barbatus</i>	Saroz Bay	C	1991	SU	TL	0.01493	2.968	0.965*	222	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Çandarlı Bay	C	1991	SU	TL	0.00775	3.234	0.918*	40	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	İzmir Bay	C	1991	SU	TL	0.01540	2.988	0.905*	118	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Güllük Bay	C	1991	SU	TL	0.02774	2.768	0.704*	122	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Gökova Bay	C	1991	SU	TL	0.01578	2.998	0.857*	60	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Saroz Bay	C	1992	WI	TL	0.00942	3.188	0.977*	80	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Çandarlı Bay	C	1992	WI	TL	0.001261	3.067	0.973*	166	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	İzmir Bay	C	1992	WI	TL	0.00871	3.204	0.980*	39	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Güllük Bay	C	1992	WI	TL	0.01442	3.051	0.980*	53	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Gökova Bay	C	1992	WI	TL	0.00824	3.219	0.967*	40	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Saroz Bay	C	1992	SP	TL	0.00321	3.309	0.922*	170	-	-	-	-	Benli <i>et al.</i> (2000)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Mullus barbatus</i>	Çandarlı Bay	C	1992	SP	TL	0.00328	3.313	0.960*	100	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	İzmir Bay	C	1992	SP	TL	0.00346	3.305	0.980*	120	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Güllük Bay	C	1992	SP	TL	0.00110	3.051	0.941*	60	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Gökova Bay	C	1992	SP	TL	0.04830	2.801	0.884*	11	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Saroz Bay	C	1993	SP	TL	0.01421	3.029	0.990*	38	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	İzmir Bay	C	1993	SP	TL	0.01382	3.038	0.938*	91	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Güllük Bay	C	1993	SP	TL	0.01205	3.115	0.981*	40	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Gökova Bay	C	1993	SP	TL	0.00736	3.314	0.960*	68	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Saroz Bay	C	1993	AUT	TL	0.03087	2.738	0.899*	48	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Çandarlı Bay	C	1993	AUT	TL	0.02738	2.824	0.963*	40	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	İzmir Bay	C	1993	AUT	TL	0.01723	2.984	0.902*	115	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	Gökova Bay	C	1993	AUT	TL	0.00767	3.292	0.950*	99	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus barbatus</i>	İskenderun Bay	C	1992–93	C	FL	-1.77494	3.026	0.956*	348	–	7.5	15.12	–	Türeli & Erdem (1997)
<i>Mullus barbatus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.0000033	3.320	0.960*	533	–	8.5	22.4	–	Anonymus (1993)
<i>Mullus barbatus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000091	3.106	0.970*	636	–	9.0	20.5	–	Anonymus (1993)
<i>Mullus barbatus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.00000201	2.941	0.955*	1084	–	8.5	21.0	–	Anonymus (1993)
<i>Mullus barbatus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000078	3.143	0.968*	1090	–	8.8	22.3	–	Anonymus (1993)
<i>Mullus barbatus</i>	Mid Black sea	C	–	–	–	0.0054	3.209	–	–	–	–	–	–	Anonymus (1991a)
<i>Mullus barbatus</i>	İzmir Bay	C	1989	AUT	FL	0.00542	3.344	–	231	13.30	10.83	19.50	–	Kara & Gurbet (1990)
<i>Mullus barbatus</i>	Aliğa-Çandarlı Bay	C	1989	AUT	FL	0.13243	2.310	–	199	14.68	11.20	19.12	–	Kara & Gurbet (1990)
<i>Mullus barbatus</i>	Edremit Bay	C	1989	AUT	FL	0.011782	2.960	–	196	15.34	11.50	18.75	–	Kara & Gurbet (1990)
<i>Mullus barbatus</i>	Gülbahçe Bay (İzmir)	C	1973	C	FL	0.0165	2.923	0.960*	6054	–	7.6	22.0	–	Togulga (1977)
<i>Mullus barbatus</i>	Edremit Bay	C	1970	SU	FL	0.022	–	–	204	–	10.0	19.0	–	Kınıkaslan (1972)
<i>Mullus barbatus ponticus</i>	Eastern Black Sea	F	1997	C	–	0.0052653	3.217	–	–	–	–	–	–	Sahin & Akbulut (1997)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Mullus barbatus ponticus</i>	Eastern Black Sea	M	1997	C	–	0.0053736	3.220	–	–	–	–	–	–	Sahin & Akbulut (1997)
<i>Mullus barbatus ponticus</i>	Black Sea	C	1988–89	C	TL	0.006855	3.156	–	2116	12.0	6.9	25.3	0.004	Samsun & Erkoyuncu (1992)
<i>Mullus surmuletus</i>	Saros Bay	C	1991	SU	TL	0.0078	3.089	0.950*	57	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus surmuletus</i>	Gökova Bay	C	1991	SU	TL	0.02168	2.920	0.926*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus surmuletus</i>	Saros Bay	C	1992	WI	TL	0.03224	2.819	0.830*	6	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus surmuletus</i>	Güllük Bay	C	1992	WI	TL	0.00984	3.242	0.913*	20	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus surmuletus</i>	Çandarlı Bay	C	1992	SP	TL	0.00510	3.221	0.810*	27	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus surmuletus</i>	İzmir Bay	C	1992	SP	TL	0.00580	3.194	0.980	28	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus surmuletus</i>	İzmir Bay	C	1993	AUT	TL	0.01177	3.131	0.958	37	–	–	–	–	Benli <i>et al.</i> (2000)
<i>Mullus surmuletus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.0000087	3.122	0.947*	170	–	11.5	32.1	–	Anonymus (1993)
<i>Mullus surmuletus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000488	2.784	0.929*	131	–	114.0	205.0	–	Anonymus (1993)
<i>Mullus surmuletus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000103	3.104	0.990*	67	–	97.0	238.0	–	Anonymus (1993)
<i>Mullus surmuletus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000209	2.971	0.968*	30	–	100.0	253.0	–	Anonymus (1993)
<i>Mustelus mustelus</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0011	3.25	0.99	35	–	38.3	97.5	–	Filiz & Bilge (2004)
<i>Myliobatis aquila</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0008	3.34	0.93	14	–	47.5	76.5	–	Filiz & Bilge (2004)
<i>Oblada melanura</i>	İskenderun Bay	C	2000	AUT	TL	0.0322	2.697	0.964	22	20.45	15.60	27.0	3.32	Can <i>et al.</i> (2000)
<i>Pagellus sp.</i>	İzmir Bay	C	1989	AUT	FL	0.01592	3.008	–	111	14.59	8.66	21.43	–	Kara & Gurbet (1990)
<i>Pagellus sp.</i>	Edremit Bay	C	1989	AUT	FL	0.14723	2.289	–	74	16.75	13.71	22.0	–	Kara & Gurbet (1990)
<i>Pagellus acerna</i>	Aegean Sea	F	1991–93	C	FL	0.00527	3.447	0.850*	85	14.74	14.7	21.0	0.34	Ozaydin (1997)
<i>Pagellus acerna</i>	Aegean Sea	M	1991–93	C	FL	0.01087	3.172	0.927*	139	13.68	10.5	17.8	0.22	Ozaydin (1997)
<i>Pagellus acerna</i>	Aegean Sea	C	1991–93	C	FL	0.01420	3.075	0.962*	302	13.27	7.8	21.0	0.24	Ozaydin (1997)
<i>Pagellus acerna</i>	Gülbağçe Bay	C	1996–97	C	FL	0.082	3.288	0.935	107	–	9.8	14.8	–	Tosunoglu <i>et al.</i> (1997)
<i>Pagellus acerna</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000876	2.646	0.806*	40	–	8.0	15.0	–	Anonymus (1993)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Pagellus bogaraveo</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	SP	FL	0.0000018	3.472	0.951*	73	-	9.0	20.0	-	Anonymus (1993)
<i>Pagellus bogaraveo</i>	Marmara, Aegean and	C	1991-93	SU	FL	0.0000083	3.150	0.978*	5	-	11.0	15.0	-	Anonymus (1993)
<i>Pagellus bogaraveo</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	AUT	FL	0.0000709	2.709	0.792*	20	-	11.0	14.0	-	Anonymus (1993)
<i>Pagellus bogaraveo</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	WI	FL	0.0000061	3.214	0.968*	81	-	9.0	19.0	-	Anonymus (1993)
<i>Pagrus coeruleostictus</i>	İskenderun Bay	C	2000	AUT	TL	0.0671	2.521	0.908	311	18.52	12.50	38.8	2.93	Can <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Saros Bay	C	1991	SU	TL	0.01299	2.972	0.832*	124	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Çandarlı Bay	C	1991	SU	TL	0.01190	3.156	0.959*	20	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	İzmir Bay	C	1991	SU	TL	0.04097	2.889	0.857*	60	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Güllük Bay	C	1991	SU	TL	0.01816	2.968	0.908*	40	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Gökova Bay	C	1991	SU	TL	0.0255	2.932	0.822*	40	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Saros Bay	C	1992	WI	TL	0.03184	2.773	0.896*	20	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Çandarlı	C	1992	WI	TL	0.01459	3.079	0.978*	29	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Gökova Bay	C	1992	WI	TL	0.01356	3.101	0.945*	20	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Saros Bay	C	1992	SP	TL	0.00109	3.537	0.941*	46	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Çandarlı Bay	C	1992	SP	TL	0.01619	3.011	0.960*	40	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	İzmir Bay	C	1992	SP	TL	0.06402	2.752	0.960*	56	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Güllük Bay	C	1992	SP	TL	0.02065	2.527	0.689*	42	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Gökova Bay	C	1992	SP	TL	0.04277	2.838	0.960*	7	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Saros Bay	C	1993	SP	TL	0.01249	3.140	0.988*	16	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	İzmir Bay	C	1993	SP	TL	0.01498	3.077	0.988*	57	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Güllük Bay	C	1993	SP	TL	0.06999	2.539	0.975*	17	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Gökova Bay	C	1993	SP	TL	0.01754	2.993	0.956*	17	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Saros Bay	C	1993	AUT	TL	0.00606	3.391	0.984*	17	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Çandarlı Bay	C	1993	AUT	TL	0.06999	2.539	0.975*	17	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	İzmir Bay	C	1993	AUT	TL	0.01699	3.001	0.944*	57	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Pagellus erythinus</i>	Aegean Sea	F	1991-93	C	FL	0.02370	2.907	0.978*	512	15.36	11.1	24.5	0.18	Ozaydin (1997)
<i>Pagellus erythinus</i>	Aegean Sea	M	1991-93	C	FL	0.2722	2.865	0.956*	163	18.27	8.8	25.6	0.41	Ozaydin (1997)
<i>Pagellus erythinus</i>	Aegean Sea	C	1991-93	C	FL	0.02423	2.985	0.972*	692	16.04	8.8	25.6	0.20	Ozaydin (1997)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Pagellus erythinus</i>	Gülbahçe Bay	C	1996–97	C	FL	0.018	3.012	0.976	204	–	8.0	24.0	–	Tosunoğlu <i>et al.</i> (1997)
<i>Pagellus erythinus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000287	2.917	0.966*	387	–	7.0	25.0	–	Anonymus (1993)
<i>Pagellus erythinus</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000122	3.080	0.966*	117	–	11.0	24.0	–	Anonymus (1993)
<i>Peristedion cataphractum</i>	Sigacil trawl area	C	2003	C	TL	0.0048	2.97	0.99	11	–	8.1	21.2	–	Filiz & Bilge (2004)
<i>Pleuronectes platessa</i>	Black Sea	C	1988–94	C	TL	0.0078	3.109	0.960*	48	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Phycis blennoides</i>	Sigacik trawl area	C	2003	C	TL	0.0017	3.55	0.89	12	–	12.3	15.0	–	Filiz & Bilge (2004)
<i>Pomadasys incisus</i>	İskenderun Bay	C	2000	AUT	TL	0.0465	2.604	0.910	106	16.12	13.40	21.2	1.75	Can <i>et al.</i> (2000)
<i>Pomatomus saltatrix</i>	Black Sea	C	1988–94	C	TL	0.0388	2.558	0.846*	19	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Pomatomus saltator</i>	İzmir Bay	C	1987	AUT–WI	TL	0.02017	2.955	–	400	–	15.0	40.5	–	Alpbaz & Kınacıgil (1988)
<i>Raja clavata</i>	Sinop	C	–	–	–	0.0026	3.200	0.990	54	–	27.3	83.2	–	Erdem <i>et al.</i> (2001)
<i>Raja clavata</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0016	3.30	0.94	37	–	20.5	99.0	–	Filiz & Bilge (2004)
<i>Raja miraletus</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0001	4.15	0.93	13	–	30.0	50.5	–	Filiz & Bilge (2004)
<i>Raja sp.</i>	Black Sea	C	1988–94	C	TL	0.0090	2.920	0.922*	40	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Sarda sarda</i>	Black Sea	C	1995–96	AUT–WI	TL	0.0058	3.176	0.980*	4104	34.42	20.0	40.0	2.21	Samsun (1997)
<i>Sarda sarda</i>	Black Sea	C	1988–94	C	TL	0.0297	2.679	0.865*	14	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Sardina pilchardus</i>	İzmir Bay	F	1996–97	C	TL	0.0053	3.275	0.872*	187	–	9.3	13.0	–	Karakayis & Togulga (2000)
<i>Sardina pilchardus</i>	İzmir Bay	M	1996–97	C	TL	0.0081	3.108	0.781*	75	–	–	–	–	Karakayis & Togulga (2000)
<i>Sardina pilchardus</i>	İzmir Bay	C	1996–97	C	TL	0.0062	3.214	0.855*	262	–	9.3	14.6	–	Karakayis & Togulga (2000)
<i>Sardina pilchardus</i>	İzmir Bay	F	1997–98	C	FL	0.0042	3.382	0.850	216	–	9.6	14.7	–	Mater & Bayhan (1999)
<i>Sardina pilchardus</i>	İzmir Bay	M	1997–98	C	FL	0.0025	3.600	0.870	148	–	9.8	14.9	–	Mater & Bayhan (1999)
<i>Sardina pilchardus</i>	İzmir Bay	C	1997–98	C	FL	0.0045	3.359	0.830	364	–	9.6	14.9	–	Mater & Bayhan (1999)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Saurida undosquamis</i>	İskenderun	F	1999–00	C	TL	0.088	3.190	0.980	368	–	9.0	35.0	–	Ismen (2002)
<i>Saurida undosquamis</i>	İskenderun	M	1999–00	C	TL	0.120	2.950	0.960	234	–	5.0	32.0	–	Ismen (2002)
<i>Saurida undosquamis</i>	Fethiye Bay	C	1993	C	FL	–1.3279	3.295	0.828*	430	–	17.3	30.8	–	Mater & Torcu (1997)
<i>Saurida undosquamis</i>	Mersin Bay	C	1993	C	FL	–0.9596	2.616	0.656*	100	–	13.5	32.2	–	Mater & Torcu (1997)
<i>Saurida undosquamis</i>	İskenderun Bay	C	1992–93	C	FL	–2.06171	3.022	0.998*	333	–	8.3	21.92	–	Türelİ & Erdem (1997)
<i>Scomberomorus commerson</i>	Güllük and Gökova Bay	C	1994	C	TL	0.1567	2.223	0.885*	70	–	52.0	87.0	–	Buhan <i>et al.</i> (1997)
<i>Scophthalmus maeoticus</i>	Black Sea	C	–	C	–	0.0047	3.418	–	–	–	40.0	–	–	Erdem (2001)
<i>Scophthalmus maximus</i>	Eastern Black Sea	F	1990–91	C	TL	0.0099	3.140	0.980	86	–	196	630	–	Avsar (1999)**
<i>Scophthalmus maximus</i>	Eastern Black Sea	M	1990–91	C	TL	0.0112	3.110	0.980	63	–	181	595	–	Avsar (1999)**
<i>Scophthalmus maximus</i>	Eastern Black Sea	C	1990–91	C	TL	0.0085	3.180	0.980	194	–	181	630	–	Avsar (1999)**
<i>Scorpaena porcus</i>	Sinop	C	1996–97	–	TL	0.054	2.590	–	633	17.26	11.49	23.63	0.083	Koca (2002)
<i>Scorpaena sp.</i>	Black Sea	C	1988–94	C	TL	0.0180	3.080	0.980*	31	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Scyliorhinus canicula</i>	Northern Aegean Sea	F	1991–96	SP	TL	0.001	3.453	0.991	95	–	–	51.7	–	Cihangir <i>et al.</i> (1997)
<i>Scyliorhinus canicula</i>	Northern Aegean Sea	M	1991–96	SP	TL	0.005	2.004	0.989	121	–	–	54.6	–	Cihangir <i>et al.</i> (1997)
<i>Scyliorhinus canicula</i>	Northern Aegean Sea	C	1991–96	SU–AUT	TL	0.001	3.205	0.919	370	–	–	54.6	–	Cihangir <i>et al.</i> (1997)
<i>Scyliorhinus canicula</i>	Siagacik trwal area	C	2003	WI, SU	TL	0.0012	3.26	0.99	637	–	10.5	50.9	–	Filiz & Bilge (2004)
<i>Serranus cabrilla</i>	Edremit Bay	C	1997–98	C	FL	0.0311	2.670	0.880	595	14.43	8.6	22.3	1.573	Torcu <i>et al.</i> (2004)
<i>Serranus cabrilla</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.0000225	2.879	0.937*	100	–	94.0	200.0	–	Anonymus (1993)
<i>Serranus cabrilla</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000081	3.059	0.929*	193	–	94.0	255.0	–	Anonymus (1993)
<i>Serranus cabrilla</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000066	3.121	0.966*	176	–	10.4	20.3	–	Anonymus (1993)
<i>Serranus cabrilla</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.00001	3.043	0.980*	75	–	11.6	17.5	–	Anonymus (1993)
<i>Serranus scriba</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000252	2.878	0.719	20	–	8.0	24.0	–	Anonymus (1993)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Siganus rivulatus</i>	Antalya Bay	F	1996–98	C	TL	0.0064	3.221	0.903*	292	15.12	7.0	21.5	0.32	Bilecenoglu & Kaya (2002)
<i>Siganus rivulatus</i>	Antalya Bay	M	1996–98	C	TL	0.007945	3.135	0.903*	229	16.09	7.1	20.6	0.34	Bilecenoglu & Kaya (2002)
<i>Siganus rivulatus</i>	Antalya Bay	C	1996–98	C	TL	0.007137	3.179	0.903*	521	–	7.0	21.5	–	Bilecenoglu & Kaya (2002)
<i>Solea solea</i>	İskenderun Bay	F	2000–01	C	TL	0.0093	3.077	0.960	530	–	20.5	28.2	–	Türkmen (2003)
<i>Solea solea</i>	İskenderun Bay	M	2000–01	C	TL	0.0117	2.998	0.973	553	–	8.8	25.0	–	Türkmen (2003)
<i>Solea</i> sp.	Black Sea	C	1988–94	C	TL	0.0019	3.580	0.941*	19	–	–	–	–	Erkoyuncu <i>et al.</i> (1994)
<i>Solea solea</i>	İzmir Bay	C	1989–90	C	TL	0.00514	3.135	0.815	335	26.2	11.0	34.5	0.6	Hossucu (1992)
<i>Solea solea</i>	İzmir Bay	C	1989	AUT	FL	0.00054	3.640	–	9	23.61	22.50	25.83	–	Kara & Gurbet (1990)
<i>Solea solea</i>	Aliağa-Çandarlı Bay	C	1989	AUT	FL	0.00182	3.458	–	11	25.31	20.50	30.10	–	Kara & Gurbet (1990)
<i>Solea solea</i>	Edremit Bay	C	1989	AUT	FL	0.20137	1.951	–	14	26.21	21.50	31.00	–	Kara & Gurbet (1990)
<i>Solea vulgaris</i>	Yumurtalık	C	1992–93	C	TL	–2.52566	3.250	0.992*	603	–	12.1	34.5	–	Altun <i>et al.</i> (1997)
<i>Solea vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.0000003	3.562	0.951*	8	–	23.8	34.2	–	Anonymus (1993)
<i>Solea vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000026	3.183	0.937*	66	–	13.9	27.4	–	Anonymus (1993)
<i>Solea vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0001367	2.479	0.740*	23	–	19.2	33.5	–	Anonymus (1993)
<i>Solea vulgaris</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000098	2.958	0.960*	11	–	–	–	–	Anonymus (1993)
<i>Sparus aurata</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.000025	2.941	0.960*	24	–	15.5	24.1	–	Anonymus (1993)
<i>Sparus aurata</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000693	2.743	0.984*	9	–	15.3	22.2	–	Anonymus (1993)
<i>Sparus aurata</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.000017	3.470	0.982*	31	–	14.2	22.3	–	Anonymus (1993)
<i>Sparus aurata</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000149	3.023	0.878*	14	–	16.0	19.6	–	Anonymus (1993)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Sphyraena chrysotaenia</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000053	3.049	0.895*	6	–	21.0	25.2	–	Anonymus (1993)
<i>Sphyraena chrysotaenia</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.000049	3.056	0.964*	22	–	14.0	25.6	–	Anonymus (1993)
<i>Sphyraena sphyraena</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SP	FL	0.0001309	2.428	0.925*	9	–	24.0	34.0	–	Anonymus (1993)
<i>Sphyraena sphyraena</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0002720	2.290	0.927*	13	–	22.0	35.0	–	Anonymus (1993)
<i>Spicara flexuosa</i>	İzmir Bay	F	1998–99	C	FL	0.1156	2.163	0.689*	240	–	9.20	14.90	–	Mater <i>et al.</i> (2001)
<i>Spicara flexuosa</i>	İzmir Bay	M	1998–99	C	FL	0.0452	2.566	0.740*	172	–	11.30	15.50	–	Mater <i>et al.</i> (2001)
<i>Spicara flexuosa</i>	İzmir Bay	C	1998–99	C	FL	0.0411	2.594	0.846*	412	–	9.20	15.50	–	Mater <i>et al.</i> (2001)
<i>Spicara smaris</i>	Eastern Black Sea	F	1989	C	TL	0.0510	3.229	0.958*	280	–	11.1	22.5	–	Sahin & Genc (1999)
<i>Spicara smaris</i>	Eastern Black Sea	M	1989	C	TL	0.0650	3.126	0.880*	176	–	11.3	22.0	–	Sahin & Genc (1999)
<i>Spicara smaris</i>	Eastern Black Sea	C	1991–92	C	TL	0.005	3.260	–	–	–	–	–	–	Ismen (1995)
<i>Spicara smaris</i>	Black Sea	C	1988–94	C	TL	0.0061	3.215	0.941*	25	–	–	–	–	Erkoyunucu <i>et al.</i> (1994)
<i>Spicara smaris</i>	Mid Black Sea	C	–	–	–	0.0051	3.217	–	–	–	–	–	–	Anonymus (1991c)
<i>Sprattus sprattus phallericus</i>	Eastern Black Sea	F	1991	SP–SU	TL	0.00214	3.456	0.999*	214	–	8.45	14.09	–	Sahin (1999)
<i>Sprattus sprattus phallericus</i>	Eastern Black Sea	M	1991	SP–SU	TL	0.00204	3.474	0.994*	158	–	8.27	12.5	–	Sahin (1999)
<i>Sprattus sprattus phallericus</i>	Eastern Black Sea	C	1991	SP–SU	TL	0.00211	3.461	0.997*	372	–	8.35	13.20	–	Sahin (1999)
<i>Squalus acanthias</i>	Black Sea	F	1969–73	–	TL	0.0041	3.004	0.996	1840	85	30.0	140.0	–	Kutaygil & Bilecik (1998)
<i>Squalus acanthias</i>	Black Sea	M	1969–73	C	TL	0.0053	2.929	0.999	1780	75	30.0	120.0	–	Kutaygil & Bilecik (1998)
<i>Squalus acanthias</i>	Eastern Black Sea	C	1994–95	C	TL	0.0013	3.254	0.81*	159	–	35.5	141.5	–	Karacam <i>et al.</i> (1996)
<i>Squalus acanthias</i>	Sigacik trawl area	C	2003	WI, SU	TL	0.0031	3.11	0.98	32	–	27.0	70.5	–	Filiz & Bigle (2004)
<i>Symphodus tinca</i>	İskenderun Bay	C	2000	AUT	TL	0.0021	3.675	0.997	10	14.41	12.10	17.2	1.75	Can <i>et al.</i> (2000)
<i>Thunnus thynnus</i>	Aegean and Mediterranean Sea	C	1996–98	C	TL	0.0000181	2.988	0.994*	3577	118.40	59.0	275.0	37.0	Karakulak & Oray (2001)
<i>Thunnus thynnus</i>	Aegean and Mediterranean Sea	C	1992–94	C	FL <120	–21.780	0.409	0.931	145	–	–	–	–	Karakulak & Oray (1994)



Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Thunnus thynnus</i>	Aegean and Mediterranean Sea	C	1992-94	C	FL >120	-186.521	1.633	0.780	1494	-	-	-	-	Karakulak & Oray (1994)
<i>Torpedo marmorata</i>	Siagacik trawl area	C	2003	WI, SU	TL	0.0273	2.91	0.98	27	-	9.2	34.0	-	Filiz & Bilge (2004)
<i>Trachurus mediterraneus</i>	Eastern Black Sea	C	1996-97	-	TL	0.0108	2.980	-	-	-	6.3	17.8	-	Kayalı (1998)
<i>Trachurus mediterraneus</i>	Mid Black sea	C	-	-	-	0.0089	2.950	-	-	-	-	-	-	Anonymus (1991b)
<i>Trachurus mediterraneus</i>	Black Sea	C	-	-	-	0.3612	1.160	-	-	-	-	-	-	Düzgünes & Karaçam (1991)
<i>Trachurus mediterraneus ponticus</i>	Black Sea	C	-	-	FL	0.004834	3.218	-	601	-	6.5	17.5	-	Sahin <i>et al.</i> (1997)
<i>Trachurus trachurus</i>	Mid Black Sea	C	1995-96	C	TL	0.00759	3.05	-	720	14.13	9.4	16.8	0.07	Yücel & Erkoyuncu (2000)
<i>Trachurus trachurus</i>	Black Sea	C	1988-94	C	TL	0.0290	2.485	0.960	77	-	-	-	-	Erkoyuncu <i>et al.</i> (1994)
<i>Trachurus trachurus</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	SP	FL	0.0000288	3.832	0.976*	259	-	9.0	29.6	-	Anonymus (1993)
<i>Trachurus trachurus</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	AUT	FL	0.0000071	3.072	0.955*	496	-	8.1	38.5	-	Anonymus (1993)
<i>Trachurus trachurus</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	WI	FL	0.0000139	3.964	0.974*	311	-	10.7	27.1	-	Anonymus (1993)
<i>Trigla lucerna</i>	Yumurtalık	C	1992-93	-	TL	-2.18077	3.088	0.966*	348	-	14.4	26.9	-	Altun <i>et al.</i> (1997)
<i>Trigla lucerna</i>	Black Sea	C	-	-	-	0.0085	3.032	-	-	-	-	-	-	Erdem <i>et al.</i> (1994)
<i>Trigla lucerna</i>	Black Sea	C	1988-94	C	TL	0.0070	3.089	0.980*	55	-	-	-	-	Erkoyuncu <i>et al.</i> (1994)
<i>Trisopterus minutus</i>	Çandarlı Bay	C	1993	SP	TL	0.0979	3.017	0.951*	35	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Trisopterus minutus</i>	Çandarlı Bay	C	1993	AUT	TL	0.00709	3.144	0.910*	117	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Upeneus moluccensis</i>	Gökova Bay	C	1993	AUT	TL	0.00606	3.351	0.962*	39	-	-	-	-	Benli <i>et al.</i> (2000)
<i>Upeneus moluccensis</i>	Mediterranean Sea	F	1991-92	C	FL	0.01051	3.150	0.945*	535	13.69	8.6	17.8	1.635	Kaya <i>et al.</i> (1999)
<i>Upeneus moluccensis</i>	Mediterranean Sea	M	1991-92	C	FL	0.00607	3.352	0.922*	176	11.16	8.5	16.1	1.378	Kaya <i>et al.</i> (1999)
<i>Upeneus moluccensis</i>	Fethiye Bay	C	1990-93	-	FL	-1.2889	3.386	0.828*	536	-	9.0	17.0	-	Torcu & Mater (1997)
<i>Upeneus moluccensis</i>	Mersin Bay	C	1990-93	-	FL	-1.0554	2.903	0.723*	500	-	8.9	16.0	-	Torcu & Mater (1997)
<i>Upeneus moluccensis</i>	Marmara, Aegean and Mediterranean Sea	C	1991-93	SP	FL	0.0000043	3.257	0.976*	152	-	81.0	167.0	-	Anonymus (1993)

Species	Area	Sex	Year	S	L	a	b	r <sup>2</sup>	N	mean	min	max	SD	Source
<i>Upeneus moluccensis</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	SU	FL	0.0000036	3.300	0.947*	300	–	93.0	176.0	–	Anonymus (1993)
<i>Upeneus moluccensis</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	AUT	FL	0.0000257	2.896	0.956*	207	–	86.0	178.0	–	Anonymus (1993)
<i>Upeneus moluccensis</i>	Marmara, Aegean and Mediterranean Sea	C	1991–93	WI	FL	0.0000027	3.353	0.941*	120	–	93.0	173.0	–	Anonymus (1993)
<i>Upeneus pori</i>	Babadillimanı bight	F	1999–00	C	TL	0.0073	3.120	0.963	461	–	6.5	15.5	–	Cicek <i>et al.</i> (2002)
<i>Upeneus pori</i>	Babadillimanı bight	M	1999–00	C	TL	0.0103	2.976	0.949	534	–	6.3	14.7	–	Cicek <i>et al.</i> (2002)
<i>Zosterisessor ophiocephalus</i>	Izmir Bay	C	1999–00	C	TL	0.0086	3.060	0.950	1066	–	8.0	23.3	–	Akyol (2003)

\* r converted into r<sup>2</sup>

\*\* length–weight relationship corresponding to mm, g

## RAZMERJA MED DOLŽINO IN TEŽO RIB, ŽIVEČIH V TURŠKIH MORJIH: PREGLED

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### POVZETEK

Članek navaja 360 razmerij med dolžino in težo rib, in sicer glede na podatke, ki so bili zbrani iz obstoječe literature in zadevajo 90 vrst iz 40 družin, živečih v turških morjih. Naklon krivulje (b) se je gibalo med 0,409 pri vrsti *Thunnus thynnus* in 4,343 pri vrsti *Dentex macrophthalmus*. Povprečna vrednost b je bila 3,088 ( $\pm$  SD = 0,898) in se ni bistveno razlikovala od 3 (t-test,  $p < 0,05$ ). Mediana koeficienta b je bila 3,062 in 50% vrednosti b se je gibalo med 2,941 in 3,190.

**Ključne besede:** razmerje med dolžino in težo, ribe, turška morja, pregled

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