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Fecundity and Egg Size of Three Shrimp Species, *Crangon crangon*, *Palaemon adspersus*, and *Palaemon elegans* (Crustacea: Decapoda: Caridea), off Sinop Peninsula (Turkey) in the Black Sea

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Abstract: The fecundity and egg size of 3 shrimp species, *Crangon crangon*, *Palaemon adspersus*, and *Palaemon elegans*, were studied off Sinop Peninsula in the Black Sea. Shrimps were sampled by beam trawl with a beam length of 3 m and 10 mm codend mesh size. Mean fecundity of *C. crangon* females was 2297 ± 134 (range: 910-3630). Mean egg size (shortest x longest axis) at early and late embryonic development stages was 0.472 ± 0.005 mm x 0.509 ± 0.008 mm and 0.489 ± 0.003 mm x 0.627 ± 0.004 mm, respectively. Mean fecundity of female *P. adspersus* was 1963 ± 144 (range: 758-3710). Mean egg size (shortest x longest axis) at early and late embryonic development stages was 0.585 ± 0.005 mm x 0.739 ± 0.011 mm and 0.622 ± 0.005 mm x 0.851 ± 0.008 mm, respectively. Mean fecundity of female *P. elegans* was 1057 ± 88 (range: 308-2628). Mean egg size (shortest x longest axis) at early and late embryonic development stages was 0.455 ± 0.005 mm x 0.567 ± 0.007 mm and 0.479 ± 0.008 mm x 0.707 ± 0.007 mm, respectively. Fecundity of all species was positively correlated to the size of the individuals. Egg size for each species increased with increased embryonic development stages. ANOVA results showed that mean egg size was significantly different between early and late embryonic developmental stages of all shrimp species ($P < 0.05$).

Key Words: Shrimp, Caridea, *Crangon crangon*, *Palaemon adspersus*, *Palaemon elegans*, fecundity, egg size

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