

## Reproductive Biology of Common Octopus, *Octopus vulgaris* Cuvier, 1797 (Octopoda: Cephalopoda) from the eastern Mediterranean Sea

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*Octopus vulgaris* has a wide range distribution in tropical and subtropical seas all around the world from 0 to 250 m depths. It is an important cephalopod species in global fishery. An annual catch of *O. vulgaris* was estimated as 215 tonnes in Turkey. In this study, there were 95 specimens (42 females and 53 males) collected in Bodrum (eastern Mediterranean Sea) from local fishermen between 2016 and 2017. Their mantle lengths varied between 8 – 30 cm (mean:  $16.6 \pm 4.7$ ) and the total weights ranged from 1000 to 8300 g (mean:  $2535.8 \pm 1879.5$ ). Potential fecundities of 42 investigated females were between 225 and 982 eggs (mean:  $589 \pm 196$ ), and the oocyte diameters varied between 0.025 and 3.5 mm (mean:  $1.06 \pm 0.8$ ). Numbers of spermatophores of males ranged between 12 and 557 (mean:  $140 \pm 127$ ), and their lengths varied from 1.2 to 10.7 cm (mean:  $4.66 \pm 1.33$ ). The potential fecundities of females were significantly correlated with mantle lengths ( $r = 0.717$ ). Mean spermatophore lengths and spermatophore numbers were correlated with mantle lengths of males ( $r = 0.797$  and  $r = 0.529$  respectively). Males got mature at smaller sizes than females. The gonadosomatic indices had a peak in March for females, therefore one might expect that the reproductive season of *O. vulgaris* was in late winter and early spring.

**Keywords:** Reproductive biology, Octopus, Fecundity, Spawning, Cephalopod fishery.