

**D-42: Biometrical characteristics of the Sri Lankan *Artemia parthenogenetica*.**

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The size of the freshly-hatched nauplius of *Artemia* as a larval feed is important for use in aquaculture hatcheries. In Sri Lanka, a parthenogenetic strain of brine shrimp (*Artemia parthenogenetica*) occurs naturally in Palavi and Hambantota salterns. Biometrical characteristics of cysts from naturally occurring *Artemia* (PAL) and from experimental culture in Palavi (PAL 89 and PAL 90) were analysed and compared with Mahalewaya *Artemia* (ML) and San Francisco Bay *Artemia* (SFB) cultured in Palavi. The hydrated cyst diameter varied from  $248.7 \pm 0.82\mu\text{m}$  in PAL 90 cysts to  $266.4 \pm 0.94\mu\text{m}$  in PAL 89 cysts. The decapsulated cyst diameter varied from  $236.5 \pm 0.76\mu\text{m}$  in PAL 89 cysts to  $245.3 \pm 0.90\mu\text{m}$  in PAL cysts. The naupliar length ranged from  $423.9 \pm 3.01\mu\text{m}$  in PAL 90 cysts to  $437.4 \pm 1.84\mu\text{m}$  in PAL cysts. Chorion thickness of cysts and the dry weight of nauplius ranged from  $3.0\mu\text{m}$  in PAL 90 to  $14.95\mu\text{m}$  in PAL 89 and from  $2.21\mu\text{g}$  in PAL 90 to  $2.77\mu\text{g}$  in ML, respectively. Both hydrated and decapsulated cyst diameters and the naupliar length of SFB *Artemia* were significantly lower ( $p < 0.05$ ) than those of Sri Lankan *Artemia*. Cysts and nauplii derived from natural populations at Mahalewaya had significantly higher values ( $p < 0.05$ ) with

respect to all biometrical characteristics when compared with Palavi natural populations. These size differences among local Artemia populations that are reported here provide aquaculturists the information necessary for selecting an appropriate naupliar size for feeding different sized fish and shrimp larvae in hatcheries.