

2.1) Definitions of homologous structures used throughout this work.

Structure	Definition
Haploneme	Nematocyst with no shaft
Heteroneme	Nematocyst with a distinct shaft
Desmoneme	Small oval/tapered adhesive nematocyst with thick coiled tubule
Rhopaloneme	Small rod-like nematocyst found on the terminal filament
Terminal filament	Distal extension of the tentillum beyond the cnidoband
Cnidoband	Distinct packing of nematocysts on the dorsal side of the tentillum
Tentacle	Tubular projection from the gastrozoid basigaster
Tentillum	Evenly spaced dorsal evagination of the tentacle carrying ordered and functional nematocysts
Involucrum	Extension of the pedicle covering part of the cnidoband
Pedicle	Proximal region of the tentillum between the cnidoband and the tentacle
Elastic strand	Mesoglea derived collagenous double strand underlying the cnidoband of some siphonophores

2.2) Definitions of the continuous morphological and kinematic characters measured.

Character	Definition	Units
Cnidoband length	Distance from the base to the tip of the cnidoband in natural position	micrometers
Cnidoband free length	Distance from the base to the tip of the cnidoband when stretched straight	micrometers
Cnidoband width	Diameter of the cnidoband on the widest point	micrometers
Involucrum length	Length of the involucrum from the base of the cnidoband to its most distal extent	micrometers
Heteroneme length	Length of the heteronemes	micrometers
Heteroneme width	Diameter of the heteronemes at the widest point	micrometers
Heteroneme shaft length	Length of the heteroneme shaft	micrometers
Heteroneme shaft width	Width of the heteroneme shaft	micrometers
Heteroneme number	Number of heteronemes in each tentillum (# in each row*2)	micrometers
Haploneme length	Length of the haplonemes	micrometers
Haploneme width	Diameter of the haplonemes at the widest point	micrometers
Rhopaloneme length	Length of the rhopalonemes	micrometers
Rhopaloneme width	Diameter of the rhopalonemes at the widest point	micrometers
Desmoneme length	Length of the desmonemes	micrometers
Desmoneme width	Diameter of the cnidoband at the widest point	micrometers
Involucrum length	Length of the involucrum from the base of the cnidoband to its most distal extent	micrometers
Elastic strand width	Diameter of the descending elastic strand at the widest point	micrometers
Pedicle width	Diameter of the pedicle	micrometers
Tentacle width	Diameter of the tentacle	micrometers
Haploneme row number	Number of haploneme rows running parallel to the length of the cnidoband	micrometers
Cnidoband coiledness	Cnidoband free length / Cnidoband length	adimensional
Heteroneme elongation	Heteroneme Length/Width	adimensional
Haploneme elongation	Haploneme Length/Width	adimensional
Desmoneme elongation	Desmoneme Length/Width	adimensional
Rhopaloneme elongation	Rhopaloneme Length/Width	adimensional
Heteroneme shaft extension	Heteroneme shaft length / Heteroneme capsule length	adimensional
Nematocyst Surface area	$4 \cdot \pi \cdot (2 \cdot ((((\text{Length}/2) \cdot (\text{Width}/2))^{1.6}) + (((\text{Width}/2)^2)^{1.6}))/3)^{(1/1.6)}$	micrometers squared
Nematocyst volume	Ellipsoid formula : $(4/3) \cdot \pi \cdot (\text{Length}/2) \cdot ((\text{Width}/2)^2)$	micrometers cubed
Nematocyst SA/V ratio	Nematocyst surface area / Nematocyst volume	1/micrometers
Total haploneme volume	Haploneme volume * Haploneme row number * (Cnidoband free length / Haploneme width)	micrometers cubed
Total heteroneme volume	Heteroneme volume * Heteroneme number	micrometers cubed
Total nematocyst volume	Total haploneme volume + Total heteroneme volume	micrometers cubed
Total discharge time	Time from initial cnidoband movement to complete conformational change	milliseconds
Average CB discharge speed	Distance covered by the leading edge of the discharging cnidoband in the total discharge time.	mm/s
Maximum CB discharge speed	Maximum speed attained by the leading edge of the discharging cnidoband	mm/s
Heteroneme discharge speed AVG	Distance covered by the heteroneme nematocyst tubule from initial ejection to full eversion in the time it takes to evert fully.	mm/s
Heteroneme discharge free speed AVG	Distance covered by the heteroneme nematocyst tubule in the time it takes to evert fully, accounting for coiling.	mm/s
Heteroneme discharge speed MAX	Maximum speed attained by the non-shaft tubule of the heteroneme nematocysts during eversion.	mm/s
Heteroneme discharge free speed MAX	Maximum speed attained by the non-shaft tubule of the heteroneme nematocysts during eversion, accounting for coiling.	mm/s
Heteroneme shaft discharge speed MAX	Maximum speed attained by the shaft of the tubule of the heteroneme nematocysts during initial eversion.	mm/s
Heteroneme filament length	Distance covered by the heteroneme nematocyst tubule from initial ejection to full eversion	micrometers
Haploneme discharge speed AVG	Distance covered by the haploneme nematocyst tubule from initial ejection to full eversion in the time it takes to evert fully.	mm/s