



VERIFICATION OF $2/3$ POWER LAW FOR SYMMETRICAL EGGS

CLEMENTINA D. MLADENOVA, TSONKO D. TSONEV and
IVAÏLO M. MLADENOV

Presented by Ivaïlo M. Mladenov

Strangely enough even at present the available parametric descriptions of the shapes of eggs are given only via purely empirical formulas without any clear relationships with their measurable physical parameters.

Here we rely on a purely geometrical model of the eggs based on Perseus spirics which were known since the ancient time but their analytical parameterizations were absent in the meantime. Such parameterizations have been found recently and the present work is based on the analytical expressions of the egg's shapes.

Making use of the derived explicit formulas for the volumes and surface areas they have been compared with the available experimental data and in this way it was concluded that the $2/3$ power law is valid. Besides, a few analytical expressions for the allometric coefficient in the form of easy to use fractionally linear or quadratic functions are presented.

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Contents

1	Introduction	2
2	Fitting	3
3	Symmetrical Eggs	4
3.1	Class <i>I</i> $\leftrightarrow$ Type (4, 3)/(3, 3) Ovoids	5
3.2	Class <i>II</i> $\leftrightarrow$ Type (4, 2) Ovoids	6
3.3	Class <i>III</i> $\leftrightarrow$ Type (3, 2) Ovoids	8
4	The $2/3$ Power Law Hypothesis	10
5	Results	12
6	Conclusion	13
A	Appendix: Surface Area and Volume	15
B	Appendix: Preston Parameterization	15
	References	16