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GEOMETRY OF THE OVOIDS: REPTILIAN EGGS AND SIMILAR SYMMETRIC FORMS

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Despite the longstanding interest in the shapes of the eggs since the ancient time till nowadays, the available parametric descriptions in the modern literature are given only via purely empirical formulas without any clear relationships with their measurable physical parameters.
Here we present a geometrical model of the eggs based on Perseus spirics which were known as well 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 idea to use the spirics as a geometrical model of the egg's shapes.
Explicit formulas for the volume, surface area and the curvatures of the eggs are derived from the first principles and these have been compared with the available empirical formulas and experimental data.

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