

**Supplementary figure 6** Minimum principal strain contour plots for different tested cranial configurations and bite points: (a-c) Original model, (d-f) medium-sized interpterygoid vacuities, (g-i) small interpterygoid vacuities, (j-l) closed palatal region. Different bite points: (a, d, g, j) vormerine tusk, (b, c, h, k) palatine tusk (c, f, i, l) last maxillary tooth. Each in ventral and dorsal view. Location and size of the vacuities highlighted by stippled line.