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The Anaximander Mountains, eastern Mediterranean: defining the bend linking Cyprus and Hellenic Arcs, by Miocene convergence followed by Pliocene-Quaternary rotation and transpression

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Interpretation of ˜1800 km of high-resolution multi-channel seismic reflection profiles shows that the region of the Anaximander Mountains experienced a protracted Miocene contractional tectonic phase characterized by an E-W trending and S-verging fold-thrust belt. In the early-mid Pliocene deformation switched to rotation and transpression, involving the reactivation, uplift and rotation of a linked thick-skinned pre-Messinian imbricate thrust fan. Back thrusts accentuated the morphology of the submarine mountains. The deep Finike Basin to the north of Anaximander Mountains has been cannibalized by this back thrusting, but its origins are likely related to depression in front of a thrust-induced load in the western Tauride Mountains. Counterclockwise rotation of the Anaximenes Mountain, and clockwise rotation of the Anaxagoras Mountain and Florence Rise produces a V-shaped morphology of the Anaximander Mountains, mimicking the development of the Isparta Angle to the north, but occurring somewhat later. We suggest that this progressive southward migration of the buckling is related to the sinistral drag that results from the rollback of the Hellenic subduction zone.