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Daly 1933, Bateman 1984, 1985a, Paterson *et al.* 1989, Godin)

.(1994, Best & Christiansen 2001

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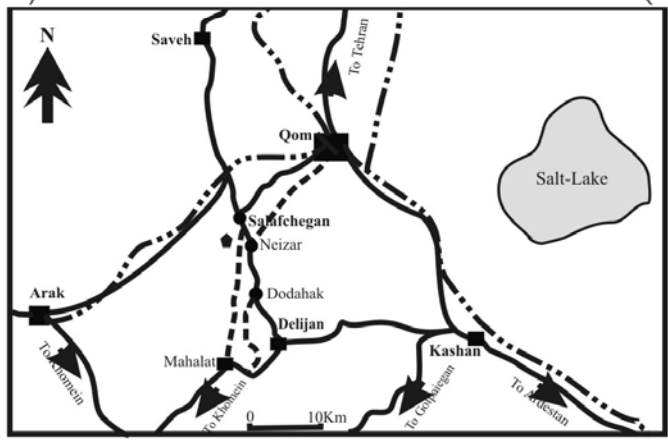
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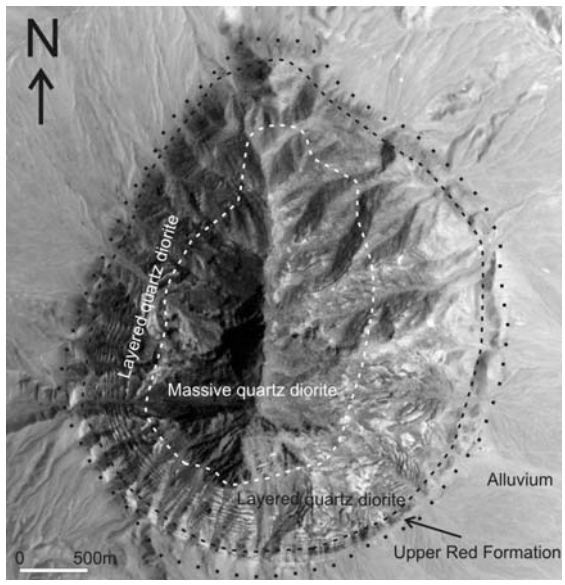
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- Main Road
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- Rail Way
- City
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- Studied Area
- Lake





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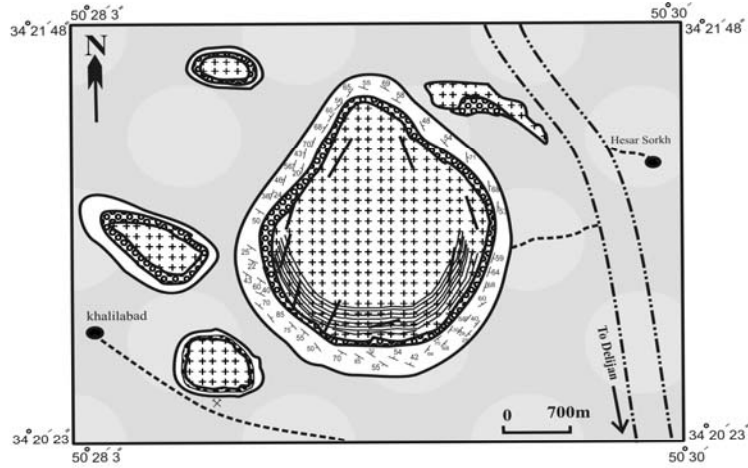
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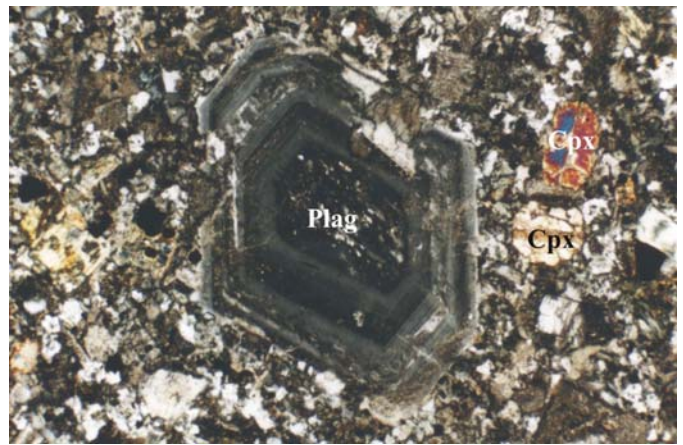
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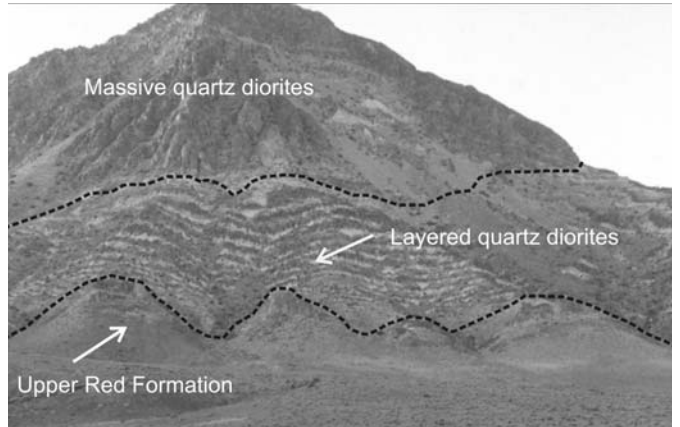
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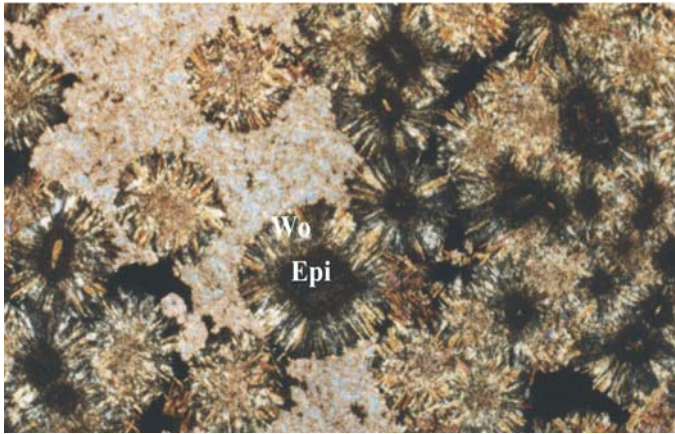
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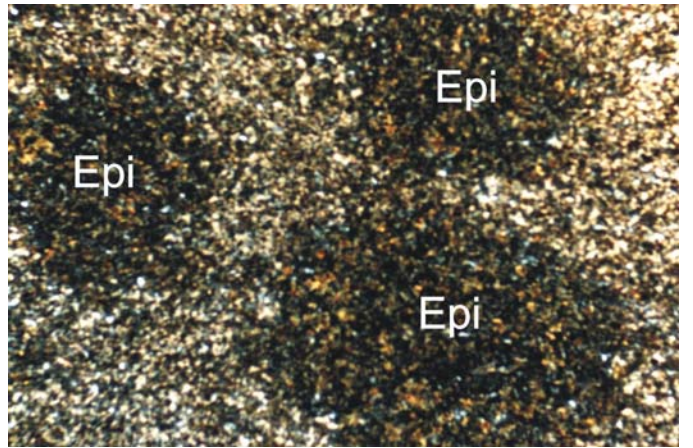
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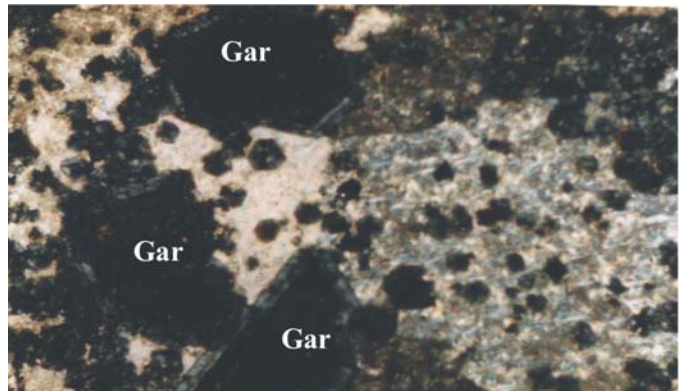
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(Winkler 1979)

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1959, Dixon 1975, Marsh 1982, Cruden 1990, Weinberg and
Sylvester *et al.* 1978, Holder) (Podladchikov 1994,

(1979, Brun & Pons 1981, Bateman 1984, 1985, Ramsay 1989

(Daly 1933)

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Marsh 1982, Weinberg & Podclahikov 1994,)

(Bateman 1985, Ramsay 1989

(Daly 1933)

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(Christiansen 2001

Godin 1994, Schmeling *et al.* 1988,)

(Cruden 1990

Godin 1994, Best & Christiansen)

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Ramsay 1975, Sylvester *et al.* 1978, Holder)

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(Christiansen 2001

Ramsay 1975, Sylvester *et al.* 1978,)

Holder 1981, Bateman 1985, Courrioux 1987, Paterson 1989,
(Paterson *et al.* 1991a,b

(Paterson *et al.* 1989)

Fink *et al.* 1990, Kaneko *et al.* 2002, Goto &)

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Minakami *et al.* 1951, Mcphie *et al.* 1993, Stewart)

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Best)

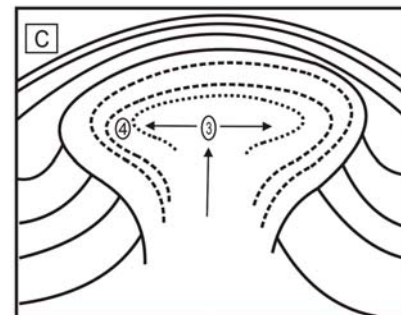
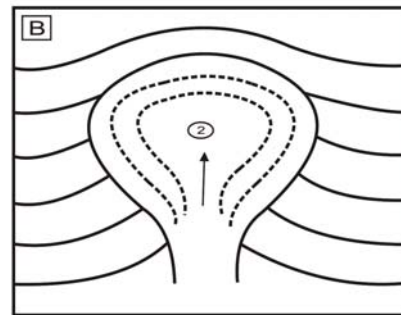
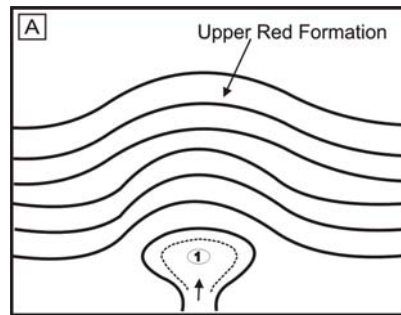
(& Christiansen 2001

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- Anderson E.M. 1951: The dynamics of faulting and dyke formation with applications to Britain. Oliver & Boyd, Edinburgh.
- Bateman R. 1984: On the role of diapirism in the segregation, ascent and final emplacement of granitoid magmas. *Tectonophys.* **110**: 311-321.
- Bateman R. 1985: Aureole deformation by flattening around a diapir during in situ ballooning: Cannibal Creek granite. *J. Geol.* **93**: 29-310.
- Best M.G., Christiansen E.H. 2001: Igneous Petrology. Black Well Science, Inc.
- Brun J.P., Pons J. 1981: Strain patterns of pluton emplacement in a crust undergoing non-coaxial deformation, Sierra Morena, Southern Spain. *J. Struct. Geol.* **3**: 219-229.
- Buddington A.F. 1959: Granite emplacement with special reference to North America. *Geol. Soc. Am. Bull.* **70**: 671-748.
- Courrioux G. 1987: Oblique diapirism: the Criffell granodiorite-granite zoned pluton (southwest Scotland). *J. Struct. Geol.* **9**: 313-330.
- Cruden A.R. 1990: Flow and fabric development during the diapiric rise of magma. *J. Geol.* **98**: 681-698.
- Daly R.A. 1933: Igneous Rocks and the depths of the Earth. MC. Graw-Hill, New York.
- Dixon J.M. 1975: Finite strain and progressive deformation in models of diapiric structures. *Tectonophys.* **28**: 89-124.
- Fink J.H., Malin M., Anderson S.W. 1990: Intrusive and extrusive growth of the Mount St. Helens lava dome. *Nature* **348**: 435-437.
- Godin P. 1994: Deformation within the Cannibal Creek Pluton and its aureole, Queensland, Australia: a re-evaluation of ballooning as emplacement mechanism. *J. Struct. Geol.* **5**: 693-707.
- Goto Y., Tsuchiya N. 2004: Morphology and growth style of a Miocene submarine dacite lava dome at Atsumi, northeast Japan. *J. Volcanol. Geotherm. Res.* **134**: 255-275.
- Holder M. T. 1979: An emplacement mechanism for post tectonic granites and their implications for their geochemical features. In Atherton M.P., Tarney J., Kent Sh. (eds) Origin of granite batholiths: geochemical evidence. Pp. 116-128.
- Holder M.T. 1981: Some aspects of intrusion by ballooning: the Ardura pluton (abstract). In Coward, M. P. (ed) Diapirism and gravity tectonics: Report of a Tectonic Studies Group. *J. Struct. Geol.* **3**: 89-95.
- Kaneko T., Wooster M.J., Nakada S. 2002: Exogenous and endogenous growth of the Unzen lava dome examined by satellite infrared image analysis. *J. Volcanol. Geotherm. Res.* **116**: 151-160.
- Mahood A. 1985: Emplacement of the Zaer pluton, Morocco. *Bull. Geol. Soc. Am.* **96**: 931-939.
- Marsh B.D. 1982: On the mechanics of igneous diapirism, stoping and zone melting. *Am. J. Sci.* **282**: 808-855.
- McPhie J., Doyle M., Allen R. 1993: Volcanic Textures: a Guide to the Interpretation of Textures in Volcanic Rocks. Centre for Ore Deposit and Exploration Studies, University of Tasmania, Hobart.
- Minakami T., Ishikawa T., Yagi K. 1951: The 1994 eruption of Volcano Usu in Hokkaido, Japan. *Bull. Volcanol.* **11**: 45-160.
- Nogle-sadate M.A.A. 1978: Les zones de décrochements et les virgations structurales en Iran. Consequences des resultats de l'analyse structurale de la region de Qom. These univ. Scientifique et Medicale de Grenoble.
- Paterson S.R., Vernon R.H., Tobisch O.T. 1989: A review of criteria for the identification of magmatic and tectonic foliations in granitoids. *J. Struct. Geol.* **11**: 349-363.
- Paterson S.R., Vernon R.H., Brudos T.C., Fowler K., Carlson C., Bishop K. 1991a: The Papoose Flat Pluton: forceful expansion or post-emplacement deformation? *Geol.* **19**: 324-327.

-
- Paterson S.R., Vernon R.H., Fowler T.K. Jr. 1991b: Aureole Tectonics. In Kerrick D.M. (ed) Contact Metamorphism. *Min. Soc. Am. Rev. Mineral.* **26**: 673-722.
- Ramsay j.G. 1975: The structure of the Chindamora Batholith. 19th Ann. Res. Inst. Afr. Geol. Univ. Leeds.
- Ramsay j.G. 1989: Emplacement kinematics of the granite diapir: The chindamora batholith, Zimbabwe. *J. Struct. Geol.* **11**: 191-209.
- Schmeling H., Cruden A.R., Marquart G. 1988: Finite deformation in and around a fluid sphere moving through a viscous medium: implication for diapiric ascent. *Tectonophys.* **149**: 17-34.
- Stewart A.L., Mcphie J. 2003: Internal structure and emplacement of an Upper Pliocene dacite cryptodome, Milos Island, Greece. *J. Volcanol. Geotherm. Res.* **124**: 129-148.
- Sylvester A.G., Oertel G., Nelson C.A., Christie J.M. 1978: Papoose Flat pluton: A granitic blister in the Inyo Mountain, California. *Geol. Soc. Am. Bull.* **89**: 1205-1219.
- Weinberg R.F., Podladchicov Y. 1994: Diapiric ascent of magma through power-law crustal and mantle. *J. Geophys. Res.* **99**: 9543-9560 .
- Winkler H.G.F. 1979: Petrogenesis of metamorphic rock. Springer Verlag, Stuttgart.