

7.2 REFERENCES

- Ball, S. H., 1922. The geologic and geographic occurrence of precious stones. *Economic Geology*, Vol. 17, pp. 575-601.
- Berger, A.R. and Jayasinghe, N. R., 1976. Precambrian Structure and Chronology in the Highland Series of Sri Lanka. *Precambrian Research*, Vol. 3, pp. 559-576.
- Bruder, B., 1995. Charakterisierung von Rubinen und Saphiren mithilfe von Flüssigkeitseinschlüssen. Diplomarbeit, Min.-Petr. Institut der Albert-Ludwigs Universität Freiburg.
- Coates, J. S., 1935. The Geology of Ceylon, *Ceylon Journal of Science (B)*, xix, pt2, pp.101-191.
- Coenraads, R.R., 1992. Surface features on natural rubies and sapphires derived from volcanic provinces. *Journal of Gemmology*, Vol.23, No. 3, pp. 151-160.
- Coomaraswamy, A. K., 1903. Occurrence of corundum insitu near Kandy, *Ceylon Geology Magazine xxi*, pp. 348-350.
- Coomaraswamy, A. K., 1904. Administration report, Mineral. Survey of Ceylon.
- Cooray, P. G. and Kumarapeli, P. S., 1960. Corundum in biotite-sillimanite gneiss from near Polgahawela, Ceylon, *Geology Magazine, xcvi*, Vol. 6, pp. 480-487.
- Cooray, P. G., 1984. An introduction to the geology of Sri Lanka (Ceylon), 2nd Edition, *National Museums, Sri Lanka Publication*, pp. 340.

- Cooray, P. G., 1994. The Precambrian of Sri Lanka: a historical review, *Precambrian Research*, Vol. 66, pp. 3-18.
- Cordani, U. and Cooray, P. G. 1989. Rb-Sr ages of granites and gneisses from the Precambrian of Sri Lanka, *Journal of the Geological Society of Sri Lanka*, Vol. 2, pp. 35-43.
- Crawford, M.L., Filer, J. and Wood, C., 1979. Saline fluid inclusions associated with retrograde metamorphism. *Bull. Mineral.*, Vol. 102, pp 562-568.
- Dahanayake, K., 1980. Modes of occurrence and provenance of gemstones of Sri Lanka. *Mineralium Deposita*, 15, pp. 81 - 86.
- Dahanayake, K. and Ranasinghe, A.P., 1985. Geology and Mineralogy of gemming terrains of Sri Lanka, *Bull. Geol. Soc. Finland*, Vol. 57, part 1-2, pp. 139-149
- Dharmaratne, P. G. R., 2001. Sri Lanka Gem Industry: past, present and future. *Zeitschrift der Deutschen Gemmologischen Gesellschaft*, Vol. 50, No.4, pp. 199-206.
- Dissanayake, C.B. and Rupasinghe, M. S., 1993. A Prospectors' Guide Map to the gem deposits of Sri Lanka, *Gems & Gemmology*, Fall 93, pp. 173-181.
- Droop, G.T.R. 1987. A general equation for estimating Fe³⁺ concentrations in ferromagnesian silicates and oxides from microprobe analyses, using stoichiometric criteria. *Min. Mag.* 51, pp. 431-435.
- Fernando, G. W. A. R., Rupasinghe, M. S. and Dissanayake, C. B., 1992. Serpentinization related to corundum crystallization at Rupaha, Sri

Lanka. (Abstract), *Proceed. 49th Annual Sessions of Sri Lanka Advancement of Science*, pp. 161-162.

Fernando, G.W.A.R., 2001. Genesis of metasomatic sapphirine-corundum-spinel-bearing granulites in Sri Lanka: an integrated field, petrological and geochemical study. *PhD thesis, University of Mainz, Germany*.

Fernando, G.W.A.R., Hauzeberger, C.H., and Hofmeister, W., 2001. Origin of corundums in Sri Lanka: Evidence from case studies of in-situ deposits. *Journal of the Geological Society of Sri Lanka*, Vol. 10. pp 37-47.

Francis, M.D.P.L., and Dharmaratne, P.G.R., 2002. Corundum /spinel reaction textures in carbonate-origin rocks, Sri Lanka Preliminary observations. *The Australian Gemmologist*. Vol (21) (5) pp. 211-214.

Francis, M.D.P.L.  and Dharmaratne, P.G.R., 2001. Plagioclase as a protective rim around corundum in metamorphosed carbonate rocks of Sri Lanka. *57th Annual Sessions, SLAAS (abstract)*. pp 206

Geiger, W., 1912. *The Mahawamsa or the great chronicle of Ceylon*- London, Pali text Society, No.3, reprinted 1964.

Geological Survey and Mines Bureau of Sri Lanka, 1997. Geological map of Nuwara Eliya – Haputale, scale 1:100,000, ISBN 955-9323-23-7

Green, D. H. and Ringwood, A. E., 1967. An experimental investigation of the gabbro to eclogite transformation and its petrological applications, *Geochim. Cosmochim. Acta.*, Vol. 3, pp. 767-933.

Grubessi, O., Marcon R., 1986. A peculiar inclusion in a yellow corundum from Malawi. *Journal of Gemmology*, Vol. 20, pp. 163-165.

- Gübelin, E.J., and Koivula, J.I., 1986. *Photoatlas of inclusions in gemstones*. ABC Edition, Zurich.
- Gunaratne, H. S. and Dissanayake, C.B., 1995. *Gems and Gem deposits of Sri Lanka* The National. Gem and Jewellery Authority.
- Guo, J. F., O'Reilly, S. Y., and Griffin, W.L., 1996. Zircon inclusions in corundum megacrysts. 1. Trace element geochemistry and clues to the origin of corundum megacrysts in alkali basalts. *Geochim. Cosmochim. Acta*, Vol. 60, No. 13, pp.2347-63.
- Hapuarachchi, D. J. A. C., 1972. Evolution of the granulites and subdivision of the granulite facies in Ceylon. *Geological Magazine*, Vol. 109, pp.435-443.
- Hapuarachchi, D. J. A. C., 1989. Some observations on the origin of gem corundum in Sri Lanka. *Journal of the Geological Society of Sri Lanka*, Vol. 2, pp. 5-9.
- Harder, H., 1986. "Naturliche Kobaltblaue spinelle von Ratnapura Sri Lanka". *Neues Jarbuch fur Mineralogie Monatshefte*, 3. pp. 97 - 100.
- Harley, S. L., 1984. An experimental study of the partitioning of Fe and Mg between garnet and orthopyroxene, *Contrib. Mineral. Petrol.*, Vol. 86, pp. 359-373.
- Hughes, W. R., 1990. *Corundum*. Butterworth-Heinemann, London
- Jayawardena, D. E.de S. and Carswell, D. A., 1976. The geochemistry of charnockites and their constituent ferromagnesian minerals from the Precambrian Southeast Sri Lanka, *Mineralogy Magazine.*, Vol. 40, pp. 541-554.

- Katz, M. B., 1971. Precambrian metamorphic rocks of Ceylon, *Geol. Rundschau*, Vol 60, pp. 1523-1549.
- Katz, M. B., 1972b. Facies series of the high grade metamorphic rocks of the Ceylon Precambrian, *International Geological Congress 24th at Montreal 1972, section 2*, pp. 43-51.
- Kehelpannala, K.V.W., 1991. Structural evolution of high grade terrains in Sri Lanka with special reference to the areas around Dodangaslanda and Kandy. *The crystalline crust of Sri Lanka*, Part 1, pp.69-88.
- Koivula, J.I., 1986. Carbon dioxide fluid inclusions as proof of natural-coloured corundum. *Gems & Gemology*, Vol. 22, No. 3, pp. 152-155.
- Kriegsman, L. 1990. Structural geology of Sri Lankan lower crust, *Terra Abstract*, Vol. 2, pp.45.
- Kriegsman, L., 1991. Sapphirine-bearing granulites from central Sri Lanka – outcrop description and mineral chemistry. In: Kroner, A., ed., *The crystalline crust of Sri Lanka, Part 1, Summary of Research of the German-Sri Lanka Consortium. Geol. Surv. Dept. Sri Lanka, Prof. Paper*, Vol. 5, pp. 178-187.
- Kriegsman, L.M.. 1993. Geodynamic evolution of the Pan-African lower crust in Sri Lanka-Structural and petrological investigations into a high-grade gneiss terrain. *PhD thesis, University of Utrecht, The Netherlands*, pp207
- Kröner, A., Cooray, P. G. and Vithanage, P. W., 1991. Lithotectonic subdivision of the Precambrian basement in Sri Lanka. In: A. Kröner (edi.), *The Crystalline crust of Sri Lanka, Part-1. Summary of research*



of the German-Sri Lanka Consortium. Geological Survey Department of Sri Lanka, Prof. Paper, Vol.5, pp. 5-21.

Krzemnicki, M. S., Hanni, H. A., Guggenheim, R., and Mathys, D. 1996. Investigation on Sapphires from an alkali basalt, South West Ruwanda. *Journal of Gemmology*, Vol. 25, pp. 90-106 .

Kumaratilake, W. L. D. R. A. and Ranasinghe, U. N., 1992. Unusual corundum bearing gem pockets at Avissawella and Getahetta, Sri Lanka, *Zeitschrift der Deutschen Gemmologischen Gesellschaft*, Vol. 41, pp. 7-16.

Martignole, J., 1979. Charnockite genesis and Proterozoic crust, *Precambrian Research*, Vol. 9, pp. 303-310.

Mendis, D. P. J., Rupasinghe, M. S., and Dissanayake, C. B., 1991. Structural control of some of the residual gem deposits of Sri Lanka; *Source, Transport & Deposition of Metals. Pagel & Leroy (eds.)*, pp.473-475.

Mendis, D. P. J., Rupasinghe, M. S., and Dissanayake, C. B., 1993. Application of Structural geology in the exploration for residual gem deposits of Sri Lanka. *Bulletin geological Society of Finland*, Vol. 65, pp 31 - 40.

Munasinghe, T. and Dissanayake, C. B. 1981. The origin of gemstones of Sri Lanka, *Economic Geology*, Vol. 76, pp. 1216 –1225.

Newton, R. C. and Perkins, 1982. Thermodynamic calibration of geobarometers based on the assemblages of garnet-plagioclase-orthopyroxene, (clinopyroxene)-quartz, *American Mineralogist*, Vol. 67, pp. 203-222.

- Olsen, S.N., 1887. The composition and role of the fluid in migmatites: a fluid inclusion study of the Front Range rocks. *Contrib. Mineral. Petrol.*, Vol. 96, pp104-120.
- Owen, J. V., and Greenough, J.D., 1991. An empirical sapphirine-spinel Mg-Fe exchange thermometer and its application to high-grade xenoliths in the Pope Harbour dyke, Nova Scotia, Canada. *Lithos*, Vol. 26, pp. 317-332.
- Perera, L. R. K., 1984. Co-existing cordierite almandine. A key to the metamorphic history of Sri Lanka, *Precambrian Research*. Vol. 25, pp. 349-364.
- Preme, W. K. B. N., 1991. Petrology of the Kataragama Complex, Sri Lanka: evidence for high P-T granulite facies metamorphism and subsequent isobaric cooling. In: A. Kroner (edi.), *The Crystalline crust of Sri Lanka, Part 1*. University of Moratuwa, Sri Lanka
www.lib.mrt.ac.lk *Summary of research of the German-Sri Lanka Consortium. Geol. Surv. Dept. Sri Lanka, Prof. Paper*, Vol. 5, pp. 200-224.
- Punchiappahamy, T. G., 1985. Historical references to gems of Sri Lanka. *Journal of the Gemmologists Association of Sri Lanka*, No. 2, pp.24-27
- Rankin, A. H., 2002. Natural and heat-treated corundum from Chimwadzulu Hill, Malawi: genetic significance of zircon clusters and diaspore-bearing inclusions. *Journal of Gemmology*. Vol. 28, No. 2, pp. 65-75.
- Roedder E., 1972. Composition of fluid inclusions. In M. Fleischer, Ed., *Data of Geochemistry*, 6th ed., U.S. Geological Survey Professional paper 440 JJ.
- Rupasinghe, M. S. and Dissanayake, C. B., 1985. Charnockites and the genesis of gem minerals, *Chem. Geol.*, Vol. 53, pp. 1-16.



- Rupasinghe, M. S. and Dissanayake, C. B., 1987. New 'in-situ' corundum deposits in Sri Lanka, *Journal of the Gemmological Association of Sri Lanka*, No. 4, pp. 2-5.
- Sandiford, O. M., Powell, R., Martin, S. F. and Perera, L. R. K., 1988. Thermal and Baric evaluation of garnet granulites from Sri Lanka, *Journal of Metamorphic Geology*, Vol. 6 pp. 351-364.
- Sengupta, P., Dasgupta, S., Bhattacharya, P.K., Fukuoka, M., Chakraborti, S. and Bhowmic, S., 1990. Petro-tectonic imprints in the sapphirine granulites from Anantagiri, Eastern Ghats mobile belt, India. *J. Petrol.*, Vol.31, 971-996.
- Schmetzer, K., Beili, Z., Yan, G., and Bernhardt, H.J., 1999. Element mapping of trapiche rubies. *Journal of Gemmology*, Vol. 26, No. 5, 289-301.
- Schmetzer, K., Hanni, H. A. Bernhardt, H.J., and Schwarz, D., 1996. Trapiche Rubies. *Gems & Gemology*, 32(4), 242-250
- Schmetzer, K., Medenbach, O., 1988. Examination of three-phase inclusions in colorless, yellow, and blue sapphires from Sri Lanka. *Gems & Gemology*, Vol. 24, pp. 107-111.
- Schumacher, R. and Faulhaber, S., 1994. Summary and discussion of P-T estimates from garnet-pyroxene-plagioclase-quartz bearing granulite facies rocks from Sri Lanka, *Precambrian Research*, Vol. 66, pp. 295-308.
- Schwarz, D., and Schmetzer, K., 2001. Rubies from the Vatomandry area, eastern Madagascar. *Journal of Gemmology*, Vol. 27, No. 7, pp. 409-16.



- Silva, K. K. M. W. and Siriwardena, C. H. E. R., 1988. Geology and the origin of the corundum-bearing skarn at Bakamuna, Sri Lanka, *Mineral Deposita*, Vol. 23, pp. 186-190.
- Spencer, R. J., Levinson, A. A., and Koivula, J. I., 1992. Opal from Queretaro, Mexico: Fluid inclusion study. *Gems & Gemology*, Vol. 28, pp.28-34.
- Srithai, B., and Rankin, A. H., 1999. Fluid inclusion characteristics of sapphires from Thailand. *In: Mineral Deposits: Processing to Processes*, (Stanley, C.J., et al., eds), Bakema Press, Rotterdam. Vol. 1, 107 –10.
- Sunagawa, I., Bernhardt, H.J., and Schmetzer, K., 1999. Texture formation and element partitioning in trapiche ruby. *Journal of Crystal Growth*, Vol.206, pp. 322-330
- Survey Department of Sri Lanka, 1988. One inch topographic map of Ratnapura, scale 1: 63,360,
- Sutherland, F.L., Schwarz, D., Jobbins, E.A., Coenraads, R.R. and Webb, G, 1998. Distinctive gem corundum suits from discrete basalt fields: a comparative study of Barrington, Australia, and West Pailin, Cambodia, gemfields. *Journal of Gemmology*, Vol. 26, No. 2, pp.65-85.
- Sutthirat, C., Saminoanya, S., Droop, G.T.R., Henderson, C.M.B. and Manning, D.A.C., 2001. Clinopyroxene-corundum assemblages from alkali basalt and alluvium, eastern Thailand: constraints on the origin of Thai rubies. *Mineralogical Magazine*, Vol. 65, No. 2, pp. 277-295.
- Themelis, T., 1992. *The Heat Treatment of Ruby and Sapphire*. Gemlab Inc. U.S.A.

Vithanage, P.W., 1972. Post-Precambrian uplifts and regional neotectonic movements in Ceylon, *Proceed. 24th Intern. Geol. Congress at Montreal*, Vol.3, pp. 624-654.

Voll, G. and Kleinschrodt, R., 1991. Sri Lanka: structural, magmatic and metamorphic development of a Gondwana fragment. In: A. Kröner (edi.), *The Crystalline crust of Sri Lanka, Part-1. Summary of research of the German-Sri Lanka Consortium. Geological Survey Department of Sri Lanka, Prof. Paper*, Vol.5, pp. 22-51.

Webster, R., 1994. *Gems their Source, description and their identification*. 5th edition-Butterworths, London.

Weerawarnakula, S. and Dharmaratne, P. G. R., 1988. Geological exploration for source rocks of gem minerals in Sri Lanka, *Proceedings of the seminar "Mining and mineral engineering" held on 4th August 1988 at the University of Moratuwa*, pp. 1-12.

Wells, A. J., 1956. Corundum from Ceylon, *Geological Magazine* xcii, pp. 25-31.

William, H. B., and William, H. D., 1988. *Principles of Mineralogy*, Wm. C Brown Publishers, USA.

