

**ARDENNITE-(AS), ARDENNITE-(V), GASPARITE-(CE) AND CHERNOVITE-(Y):
FIRST RESULTS OF A MINERALOGICAL STUDY OF THE
METARADIOLARITE-HOSTED MANGANESE ORE MINERALISATIONS IN THE
FUCHSSEE AREA, RADSTADT TAUERN, SALZBURG, AUSTRIA**

Kolitsch, U.^{1,2}, Schachinger, T.³ & Bernhard, F.⁴

¹Mineralogisch-Petrographische Abteilung, Naturhistorisches Museum, Burggring 7, A-1010 Wien, Austria

²Institut für Mineralogie und Kristallographie, Universität Wien, Althanstr. 14, A-1090 Wien, Austria

³Akkonplatz 5/20-21, 1150 Wien, Austria

⁴Institut für Erdwissenschaften, Bereich Mineralogie und Petrologie, Karl-Franzens-Universität Graz,

Universitätsplatz 2, A-8010 Graz

e-mail: uwe.kolitsch@nhm-wien.ac.at

In the Fuchssee area (WNW of Tweng im Lungau, Radstadt Tauern) manganese ore mineralisations are hosted by folded Jurassic metaradiolarites (Hochfeind Nappe, Lower Austroalpine unit; TOLLMANN, 1964; HÄUSLER, 1988). The following minerals were reported previously: "alurgite", apatite, braunite, jacobsonite, piemontite, rhodonite, roméite and spessartine (MEIXNER, 1935, 1951). A detailed, ongoing re-investigation of the layered, lenticular to nodular mineralisations by SEM-EDS and single-crystal X-ray methods led to the identification of three arsenate minerals new for Austria: ardennite-(As), ardennite-(V) and gasparite-(Ce). (We note that ardennite-(As) was also recently identified by us from the Navis creek, Navis valley, North Tyrol.) The following other species were confirmed as well (in alphabetical order): albite, baryte, braunite, calcite, celestine, cerianite-(Ce), chernovite-(Y), clinocllore, coronadite, cryptomelane-group minerals (often Ca-dominant), dravite (Cu-bearing), fluorapatite, hematite, kretznichite(?), kutnohorite, magnesioriebeckite(?), manganocumingtonite, monazite-(Ce) (As-rich), muscovite, piemontite (in part REE-bearing), pyrolusite, pyrophanite, pyroxmangite(?), rhodochrosite, rhodonite, senaite(?) (Mn-rich), spessartine, a stilpnomelane-group mineral, tephroite, titanite, quartz. Many mineral components show distinct zoning which reflects at least two tectonometamorphic episodes involving fluid activity. For example, fluorapatite has large As-enriched cores. It is worthy noting that baryte and celestine, both with strongly variable Ba:Sr ratios, were found as tiny grains within braunite aggregates or quartz, attesting to the hydrothermal origin of the ore. Cerianite-(Ce) also occurs as tiny inclusions within braunite.

Selected details on these mineralisations, which are similar to some of the As-rich manganese ore mineralisations in Liguria, Italy (CABELLA et al., 1999; MARCHESINI & PAGANO, 2001), will be presented and discussed.

CABELLA, R., LUCCHETTI, G. & MARESCOTTI, P. (1999): *Can. Mineral.*, 37, 961-972.

GÜNTHER, W. & TICHY, G. (1979): *Mitt. Ges. Salz. Landeskunde*, 119, 351-373.

HÄUSLER, H. (1988): *Jb. Geol. B.-A.*, 131, 21-125.

MARCHESINI, M. & PAGANO, R. (2001): *Mineral. Record*, 32, 349-379; 415.

MEIXNER, H. (1935): *N. Jb. Mineral., Beil. Bd.*, 69, A, 500-514.

MEIXNER, H. (1951): *N. Jb. Mineral., Mh.*, 8, 174-178.

TOLLMANN, A. (1964): *Mitteilungen der Geologischen Gesellschaft in Wien*, 57, 49-56.