

**COPPER ORE SURVEY IN SOUTH TYROL: POSSIBLE ORE SOURCES FOR THE
LATE BRONZE AGE (LAUGEN CULTURE) SMELTING SITE
FENNHALS/KURTATSCH (SOUTH TYROL, ITALY)**

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The Late Bronze Age copper smelting site “Fennhals” above Kurtatsch is situated near the border of the Italian provinces South Tyrol and Trentino on the south tyrolean side. The very isolated site is located at 1160 m a.s.l. on the passage to the Nonstal (Trentino) and was discovered in the 70th of the last century. The archaeological record of the smelting site is covered by debris flows and humus layers. The conservation of smelting furnaces, roasting beds and ceramic fragments is therefore good. Beside a still charge filled, clay lined furnace and roasting installations several tuyères, technical ceramics and copper slag fragments complete the record.

The rather isolated geographical position of the smelting site is puzzling since the few lager copper ore occurrences in South Tyrol namely the Pfunderer Berg near Klausen and Prettau in the Ahrntal are 50 km and 110 km air-line distant. In the Nonstal “small copper ores occurrences” are postulated and would be accessible by a five hours march over the Fennberg mountain crest. From the metallogenetic map of BRIGO & OMENETTO (1978) copper ore minerals as major or minor components will be present also in the Ultental which is accessible over the high plateau of the Nonsberg. Other farer distant copper occurrences can be found in the Upper Vinschgau Valley and Ortler region. From the Pb-Zn deposit Schneeberg few chalcopyrite-rich mineralizations are documented. In the Trentino small copper mineralizations are present to the South East of the city of Trento and associated with the magmatism in the Permo-Triassic rocks in the South Alpine (Monzoni intrusion in the Val di Fiemme). Apart from the Nonsberg mineralizations, all known copper ore occurrences are at least 30 km distant (Monzoni, Ulten).

This contribution presents a preliminary survey and mineral-chemical analyses of copper-rich ores from the Pfunderer Berg, Prettau, Schneeberg, Ultental, Monzoni, Upper Vinschgau and Nonsberg and the comparison of the former data with the phase composition of slag samples from the Fennhals smelting site in order to track back the ore to the deposit.

BRIGO, L., OMENETTO, P. (1978): Verh. Geol. B-A., 3, 75-92.