MICROMOUNTERS OF NEW ENGLAND
NEWSLETTER

The MMNE was organized on November 8, 1966 for the purpose of promoting the study of minerals that require a microscope

No. 277 February, 2007

Current Meeting
Saturday, February 17th
Billerica, MA library
Doors open at 9 am

Map and driving directions are on page 5

Next Meeting
Saturday, March 17th
Location to be announced

For information regarding **MEETING CANCELLATION** due to inclement weather, contact:
Tom Mortimer
(603) 673-4039
tjmort@aol.com

$$$$$** We are now in the month of February and you should have paid **$$$$$ your dues by now - $ 12.00 for a single membership and $ 16.00 for your whole family.

So, are you feeling guilty for not having paid? You can get rid of that guilt by sending your payment as soon as possible to your friendly treasurer Anna Wilken, 79 Meadow Lane, Campton NH 03223.

As you can see, this newsletter only contains a bunch of pictures **######** reprinted from an article recently published in the French Micromounter Association Newsletter ("Le Cahier des Micromonteurs" – http://www.micromineral.org). Many thanks to the people who have contributed to the past Newsletters. If you have not already done it, now is time to consider writing something for the Newsletter, or send photographs. The Newsletter is a club production, and your contribution is needed to keep it fat and healthy – contrary to some humans, diets do not improve newsletter's health.

The Montgros Pb-Zn Mine (Pinols claim, Auvergne, France)

(*adapted from a paper by Paul Médard, Georges Pourtier, and Daniel Barrier (2006) A Montgros en Haute-Loire, ces minéraux qui cachent laforêtite. Le Cahier des Micromonteurs 94: 19-23*)

by Etienne Médard

The Montgros Pb-Zn deposit was discovered in 1890, and actively mined from 1899 to 1912. It is often considered a small outlier of the large Brioude-Massiac Sb-Pb-Zn-As mining district of central France (Périchaud, 1970). Four mineralized veins produced 10000 tons of ore containing 15% of Pb metal. Zinc was not recovered at that time. The mineralizing event in this area has been dated at around 250 Ma (Brill et al. 1991). The mine is situated in a deep ravine, and had not received much attention from collectors until recently, when some nice zinc microminerals were found. The various shafts are all collapsed, and collecting can only be done in the dumps. However, due to the steep slopes and the southern exposures the dumps have not been overgrown by vegetation, and offer good collecting conditions. The mine is situated a couple miles from my father's family home, and we have been collecting there for a long time, initially for massive ore, and more recently for microminerals.

The ***Newsletter*** is the official publication of the Micromounters of New England (MMNE). The last by-laws revision was April 19, 2003. The MMNE is a member of the Eastern Federation of Mineralogical and Lapidary Societies (EFMLS) (http://www.amfed.org/efmls) and the American Federation of Mineralogical Societies (AFMS) (http://www.amfed.org). Material from the *Newsletter* may be copied in other rock and mineral publications if credit is given to the author and the *Newsletter* and permission has been obtained from the author. If there are questions regarding copying contact the editor. The club address is c/o the Secretary. Meetings are held monthly, September through May, except for December, and usually on an informal basis in July and August. Sites rotate and will be posted in the *Newsletter* as far in advance as possible. Visitors are welcome to attend all meetings. Bring a microscope and light source if you have one.

DUES are $12/year for a single person and $16/year for a family membership, levied on a calendar basis. The family membership includes two adults and all children under 18 living at the same address. One copy of the *Newsletter* will be sent on a family membership.

2007 CALENDAR OF UPCOMING EVENTS

February 2007

- 8-11 – Tucson Mineral Show – Main Show Thu/Fri/Sat 10-6, Sun 10-5 http://www.tgms.org
- 17 – MMNE meeting, Billerica Public Library, doors open at 9 am (Map and directions on page 5)
- 23-24 6th Annual Winter Micromounter Gathering (Florida) http://home.nctv.com/earlrock/wintermicro/index.html
- 24-25 – 14th Annual Show; NY State Academy of Min., Fri/Sat 10-5, NY State Museum, Empire State Plaza, Madison Ave, Albany; admission $6; Mike Hawkins, (518) 486-2011

March 2007

- 3-4 – Spring show; NY Mineralogical Club; Holiday Inn-Midtown, 440 W. 57 St. New York; Sat 10-6, Sun 11-5; admission $6; www.excaliburmineral.com.
- 3-4 – 44th show; DE Min. Soc.; Delaware Tech. & Com. College, Churchmans Rd. Newark, DE Sat 10-6, Sun 11-5; Karissa Hendershot 302-762-7760 / Gene Hartstein, 302-234-4488 gene@fossilnut.com.
- 17 – MMNE meeting, place to be announced
- 24-25 – Old Westbury, NY: 35th annual show; Island Rock Hounds; Old Westbury High School, Post Rd. Sat. 10-5, Sun. 10-5; admission $4.50; Nancy Colburn, (516) 334-4398; nileda55@yahoo.com.
- 31 – Mineral Madness, Boston Mineral Club and Harvard University, http://www.hmnh.harvard.edu

April 2007

- 15-16 – Annual show Maine Min. & Geol. Society; Univ. of New England gym, Stevens Ave. Portland ME; Sat 10-5, Sun 10-5; contact Sheryl Gandy, 513 Main St., Monmouth, ME 04259.
- 28-29 – 35th annual show, Franklin-Ogdensburg Mineralogical Society, Franklin School, Washington Ave., Franklin NJ; Sat 9-5:30, Sun 10-5; Sterling Hill Mining Museum, (973) 209-7212

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According to Périchaud (1970), there are three different phases of primary mineralization:
- phase 1: quartz, arsenopyrite, pyrite, marcassite
- phase 2: quartz, galena, sphalerite (by far the most important)
- phase 3: baryte, calcite, ankerite, galena, freibergite

Galena crystals are uncommon, and often covered with a cerussite coating. Sphalerite crystals are much more abundant, since sphalerite was not recovered but dumped with the low-grade material. A new mineral, laforêtite ($AgInS_2$, chalcopyrite group) has been identified in a piece of ore from the third mineralizing phase. The only crystal, collected by Claude Laforêt in the 80's measured 20 * 30 µm, and was included in galena. A thorough search, including the making of many polished sections, has not produced any more samples. Nonetheless, that small crystal was enough to define a new mineral species (Meisser et al. 1999), and the Montgros Mine is now a proud Type Locality! I know, that's nothing compared to Palermo…

Cerussite, anglesite and pyromorphite microcrystals have all been identified, but are not very abundant, nor of exceptional quality. More interesting are the zinc secondary minerals, hemimorphite, smithsonite, and hydrozincite. They formed from the weathering of sphalerite, and although most of them can be proved to be pre-mining, some of the hydrozincite might have been formed directly on the dumps.

References:

Brill H, Bonhomme MG, Marcoux E, Baubron JC (1991) K/Ar ages of mineralizations in Brioude-Massiac, Pontgibaud and Labessette – position of these districts in the geotectonic evolution of the French Massif Central. Mineralium Deposita 26: 189-198.

Médard P, Pourtier G, Barrier D (2006) A Montgros en Haute-Loire, ces minéraux qui cachent laforêtite. Le Cahier des Micromonteurs 94: 19-23 (*in French*)

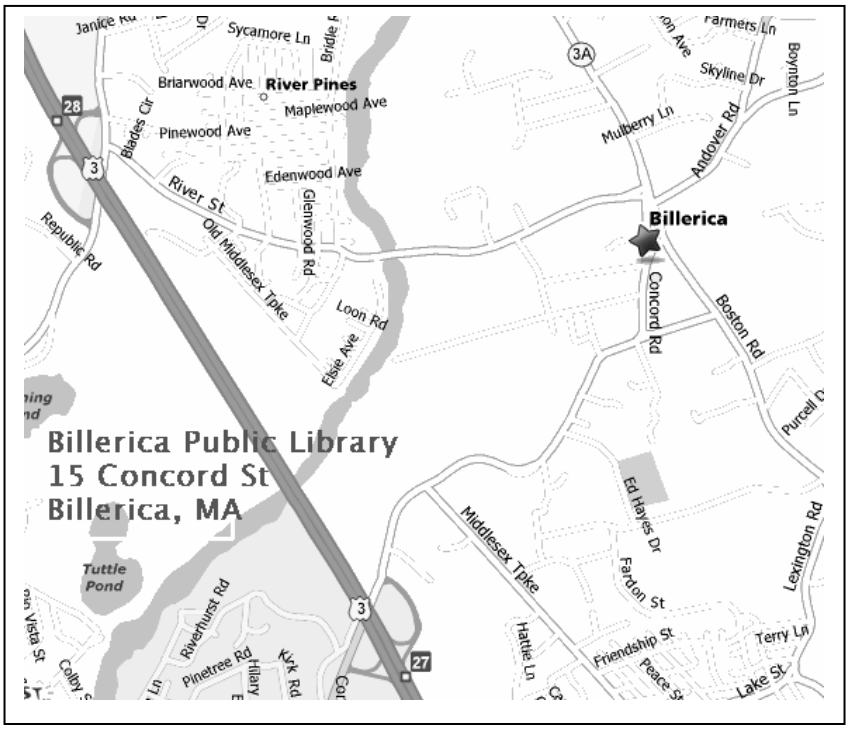
Meisser N, Thelin P, Chiappero P-J, Maurel C (1999) Laforêtite, $AgInS_2$, a new mineral of the chalcopyrite group from the Montgros mine, Haute Loire, France. European Journal of Mineralogy 11: 891-897.

Périchaud J-J (1970) Les gisements métalliques du district à antimoine de Brioude-Massiac. PhD thesis, Clermont Ferrand (*in French*).

Hemimorphite "egg clusters" on sphalerite and quartz from Montgros Mine (Paul Médard collection, Robert Vernet photo)

Secondary Zn minerals from the Montgros Mine, Auvergne, France. Above, two different forms of hemimorphite $Zn_4Si_2O_7(OH)_2.H_2O$. Crystals from the right picture are so small and tight that the grouping appears spherical. Intermediate types have been found. Below, whole and broken spheres of hydrozincite $Zn_5(CO_3)_2(OH)_6$. All samples Paul Médard collection, all photos by Robert Vernet.

Smithsonite $ZnCO_3$ on hemimorphite from the Montgros Mine, Auvergne, France. Paul Médard collection, Robert Vernet photo.



DIRECTIONS TO BILLERICA PUBLIC LIBRARY

15 Concord Rd. Billerica, MA 01821

From Route 3 take exit 27 the Concord Road exit.

At the end of the ramp, take a right onto Concord Road.

Follow Concord Road approximately 1 mile into the center of Billerica.

As you come to the first set of lights you will see the library on your left. You must go through the light and all the way around the common so that the library is on your right. Parking is in the rear of the building.

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