

MAPPLINES

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FANTASY MAPS AND
FICTIONAL LANDSCAPES

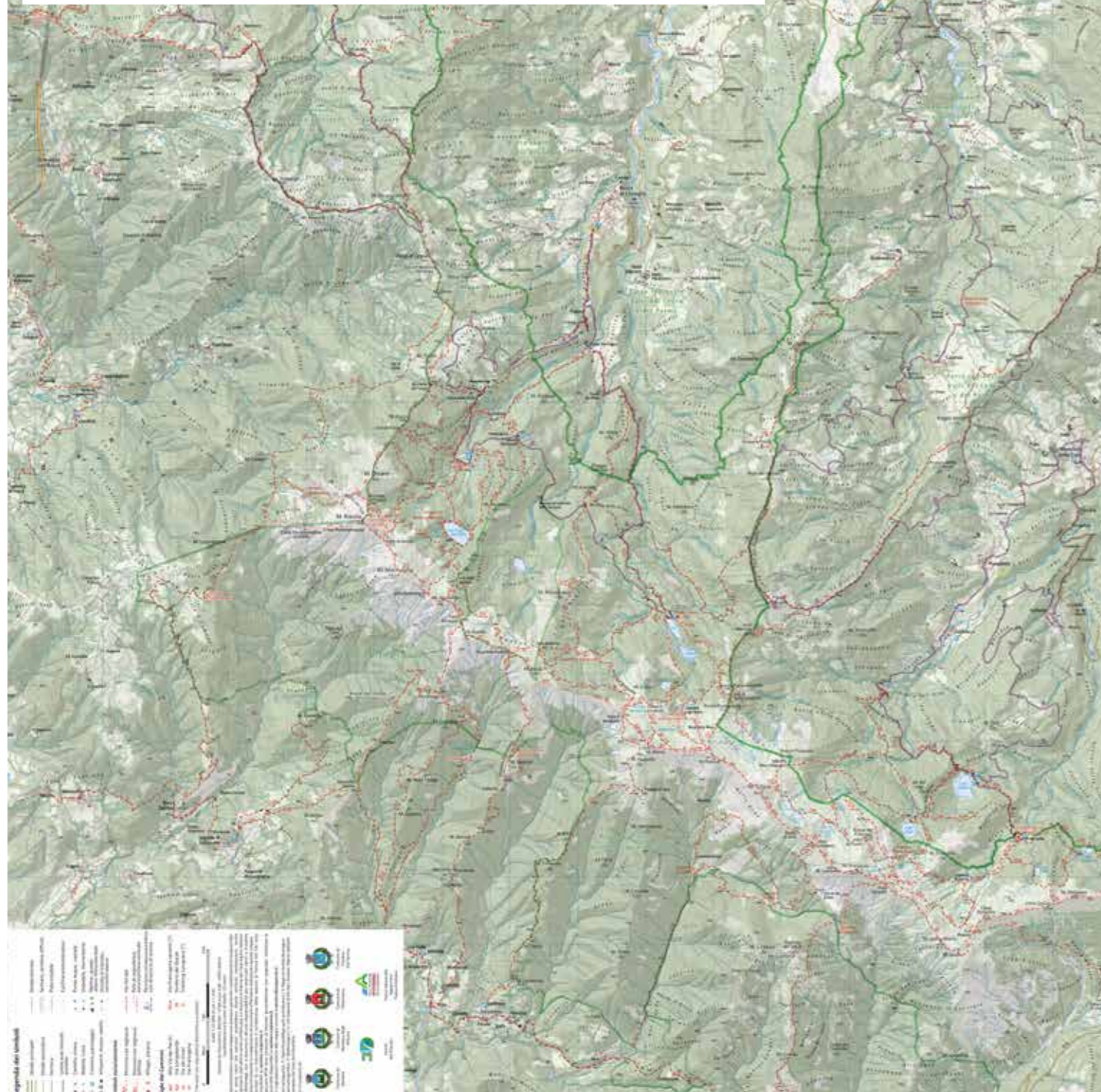
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PIECE OF
CIRCUS
EPHEMERA

Chris Gilbert, British Antarctic Survey

A hiking map verified and created by the Club Alpino Italiano – Parma section

By Marco Barbieri,
Co-authors: Carlo Prospero and Piergiorgio Rivara



In 2022 the section of Parma of the Club Alpino Italiano (CAI) created a new 1:25,000 scale hiking trails map of the Parma Apennines. It is a series of seven printed maps of 70 x 100 cm format with front/back cartography. The work was carried out in quite a short time: three months for the conception, design and start-up of the works and seven months for the creation of the maps. Each month, one map was created, printed and distributed. The printed maps were created to integrate a digital version of the section's hiking network, published on an interactive web map (sentieri.caiparma.it).

So far nothing new: printed hiking maps of even more extensive areas have been created in other parts of Italy by private publishing houses and public authorities. However, the work of the Parma CAI section has a peculiarity that distinguishes it from the others: the maps were created using OpenStreetMap (OSM) data, with the hiking theme (and more) entirely developed, updated and monitored by the volunteers of the CAI section directly on the OSM platform.

For some years now, a working method has been consolidated which sees OpenStreetMap as the place to enter and maintain data on hiking trails routes, inserted in the context of a basic cartography in continuous enrichment and constant updating. Since 2016, the Club Alpino Italiano has pushed hard in this direction by activating mutual collaboration with the OpenStreetMap community, defining the guidelines for mapping and investing heavily in training. The 'OpenStreetMap method' is in fact at the basis of the making of the new Cadastre of the Italian Hiking trails network (Rete Escursionistica Italiana – REI).

These are four reasons why the working method is extremely advantageous:

1. The possibility of collaborating on the database by volunteer mappers spread throughout the area allows them to carry out a very important job that is impossible to do otherwise: keeping the basic cartographic data and hiking trails data updated almost in real time.
2. The work and cross-supervision by true connoisseurs of the area, combined with the complex of advanced tools made available within the OpenStreetMap editing platform leads to very high quality and accuracy of the data. Let's think, for example, of the geometric precision of the paths that is obtained by combining the direct survey on the ground and by overlapping the recorded gpx track with the cloud of GPS points collected with a crowd-sourcing system.
3. The 'open' character of the OpenStreetMap project has as a direct consequence the maximum diffusion and exchange of information. Hiking route data is already being used and shared on third-party applications wherever OpenStreetMap data is presented in the most varied forms.
4. The ease of data modification and the widespread manpower allow to reduce the time and costs of creating the maps and will allow a lean updating process for future reprints of the maps.

But let's go back to the Parma CAI section work. With this article we also want to describe in more detail the working team and the activities that were the basis of the project. We believe this can help to better appreciate the complexity and the high value of the work.

The following was the working group:

- A 'restricted' operational working group (two people from the CAI Section).
- The cartographer.
- The reviewers of the draft maps (Commission Trails, a large group of expert members of the area, the subsections).
- The 'promoters' who took action to build relationships and involve local authorities (11 members).
- Two people from the Civil Service for on-site checks.
- Five 'spot' collaborators for checking the numerous MTB routes on the maps.
- A 'Crisis Unit' made up of five members of the Board of Directors.
- The *Gazzetta di Parma*, the local newspaper, that took care of the first distribution of the maps.

The following is the work flow followed for each map:

- The CAI working group checked the hiking trails, correcting and integrating any wrong or missing roads, designed the MTB routes and selected the points of interest to be included on the map.
- The cartographer integrated the toponyms, sourcing additional names from regional databases, and created the first version of the map (delivering it with a time limit of 20 days before publication).
- The CAI working group and the local auditors checked the draft (15 days).
- The cartographer made the reported corrections and delivered the job to the printer (seven days).
- The printer produced the maps, had them folded, bagged and delivered them to the CAI section for distribution.

As you can see from the map images, the style of the map has been designed for mountain activities: in addition to all the details on the buildings, transport network, hydrography, toponymy, hiking network, particular attention has been paid to the representation of the landforms and nature of the territory. All of this information is essential for a proficient orientation of hikers in the area.

The work done will remain an important asset for the Parma CAI section and will allow us to periodically update and improve the maps with reduced times and very limited costs. The close integration between digital and paper can then lead to new and interesting developments.



Marco Barbieri

After graduating in Geological Sciences, Marco began to practise his professional skills indigital and printed cartography, driven by his passionate interest in the mountains and in hiking trail maps. In 2017 he co-founded Webmapp (webmapp.it), a start-up specialised in the production of web and mobile apps for the outdoors. Marco is an enthusiastic collaborator of the OpenStreetMap project: since 2010 he has been an OSM mapper and organiser of Mapping Parties in mountain huts. Today Marco is a freelance cartographer, based in Florence, and mainly deals with the production of mountain cartography.



Piergiorgio Rivara

A mountain enthusiast since he was a child, at the age of 20 he discovered the mtb as a means of exploring the territory of the Parma Apennines and gradually the passion led him to found the mtb group within the Parma section of the CAI to share his passion with other people. Curiosity to always discover new routes and places to visit by mtb has brought him closer to mapping on OSM since 2010, and he became one of the first active volunteers in the province of Parma, especially with regards to the mapping of mountain routes. He brings his knowledge of OSM within the CAI to organise and archive the path heritage managed by the section in support of the establishment of the national cadastre of paths, also following both digital and printed cartography projects. He lives in Parma and is a national CAI cycling tour guide.



Carlo Prosperi

Carlo is also a mountain enthusiast, lives in Parma, and enrolled in the CAI in 1973 to attend mountaineering and ski mountaineering courses. In 1997 he obtained the title of Hiking Guide and became director of the Advanced Course until 2008. In 2012 the School of Hiking and Cycle Hiking of Cai Parma was born and he became its director until 2015. Since 2015 he has been working in the Trails and Cartography Sectional Commission and since 2017 participates in the Hiking Trails and Cartography Regional Commission of CAI Emilia Romagna. Since 2018 Carlo has been an OSM mapper, and started following both digital and printed cartography projects of the CAI Parma section.



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