

Informationen zur Umwelt und für Naturreisende auf Kreta:
Information about the Environment and for travellers in Crete:**Excursion to the charcoal maker between Aghia and Melidoni**
Dark Clouded Yellow (*Colias crocea*)

In the North of Crete (Prefecture Rethymnon) here at the street from *Aghia* [Αγιά] to *Melidoni* [Μελιδόνιον], you still can experience "charcoal production to old tradition" and watch the char burner of the region at work at the charcoal pile. "Charburner Road" can be reached via the "Old Road" *Rethymnon-Iraklion* [Ρέθυμνο - Ηράκλειο], turning off at *Mourtzana* [Μουρτζανά] towards *Aghia* and from there the direction to *Melidoni* (while being in *Melidoni* an excursion/visit of the tourist developed Melidoni Cave is worth). The charcoal trade is still no prehistoric industry; the art of wood charring is passed from generation to generation and thus preserved as a cultural asset.

Charcoal burning is a very old craft which already date back to the Iron Age (around 1000-500 BC). Even then, ore was melted using charcoal obtained. Charcoal achieve a much greater heat than wood from the incineration and also has the advantage that it is at lower mass and much lighter and therefore more easily to be transported and stored. In the production of charcoal, the charring take place under lack of oxygen. This means that only as much oxygen as needed will feed the process to keep the process in motion. Because of this the carbon maintains up to 90%.

The charcoal piles are built on plane ground. Construction begins in the middle with the so-called wealth, a shaft formed by pole wood, which are set vertical in the ground and interconnected. Olive wood is piled then carefully around and than delivered with 1 yard long wooden staff. The "roof" overhead is a layer of reeds, leaves straw or hay. The whole is covered then with Earth, to complete the pile hermetically. Then the pile can be set on fire. The burning is regulated by the charcoal maker, while he stitches small holes in the ground cover or closes again. During the charring the pile shrinks to about a third of its original size. The entire process from building to douse the pile and harvest of coal takes 2-4 weeks (depending on the size of pile).



The basic structure of the pile requires "many hands working" and effort (**picture left**). The "pole wood building" (before the final "roof") is more a work for a specialist with experience (**picture right**).



The finished pile is inflamed via a shaft with glowing charcoal filled into it. It is created in specifically brick kilns (Figure above).

Photos: U. Kluge (2004)

Hillside close to *Mourtzana*, overgrown with *Allium* (Leek). The perennial herbs are up to 5.9 feet high with leaves up to 2 inch wide; the umbels of *Allium communatum* are pale pink or light purple coloured. Blooming period May to June.

Dark Clouded Yellow or Common Clouded Yellow (*Colias crocea*)

“The clouded yellow is known in the Mediterranean (including in Crete). The upper side is golden to orange yellow with a broad black margin on all four wings and a black spot near the center forewing. The underside lacks the black borders and is lighter, with a more greenish tint, particularly on the forewings. In the forewing underside is the same dark spot as on the upper side, but often with a light center; the hind wing underside has a white center spot, often with a smaller white or dark dot immediately above it. Sometimes, a row of black dots occurs on the under wings’ outer margins, corresponding to where the black border ends on the upper side, Females differ from the males in having yellow spots along the black borders on the upper side. In a small proportion of females the golden upper side colourations is replaced by a pale cream colour. In southern Europe and North Africa they breed continuously throughout the year. Eggs are laid singly on food plant leaves. The caterpillars grow fast in warm weather, sometimes pupating within a month. Pupation lasts for two or three weeks and in good years there can be as many as three generations per year, with adults still on the wing at the beginning of November. Common Clouded Yellows feed on a variety of leguminous plants, namely Faboideae.



The figures show a copula of the butterfly and the stages of metamorphosis egg, Caterpillar, and Doll

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