

# Global Mapper technology confirms Homer's description of ancient Ithaca as 'low-lying'

- Homer described Ithaca in the *Odyssey* as low-lying and to the west
- But today's island of Ithaki is mainly mountainous and lies to the east
- However the Paliki peninsula appears low-lying and is located to the west
- New Global Mapper software proves that its elevation agrees with Homer

At a recent Press Conference in London a radical new solution was presented for the 3,000-year old enigma of the location of the Greek hero Odysseus' island of Ithaca that is described in such detail in the poet Homer's *Odyssey*. Within 24 hours the news of this discovery had been relayed by over 100 newspapers, TV and radio stations world-wide. Since then the international project team has delivered televised seminars about the discovery to audiences in London, Washington, Athens and Kefallinia.

In their October 2005 book '*Odysseus Unbound - The Search for Homer's Ithaca*', the team members Robert Bittlestone (Chairman of the management consultancy Metapraxis), James Diggle (Professor of Classics at Cambridge University) and John Underhill (Professor of Geology at Edinburgh University) set out strong evidence that ancient Ithaca was located on the western peninsula of Kefallinia (Cephalonia), an area called Paliki, not on the Greek island that is today called Ithaki. The crucial part of this evidence is the proposal that the isthmus of Thinia that separates Paliki from the rest of Kefallinia was formerly a marine seaway which has been infilled by catastrophic rockfalls triggered by earthquakes and land uplift.

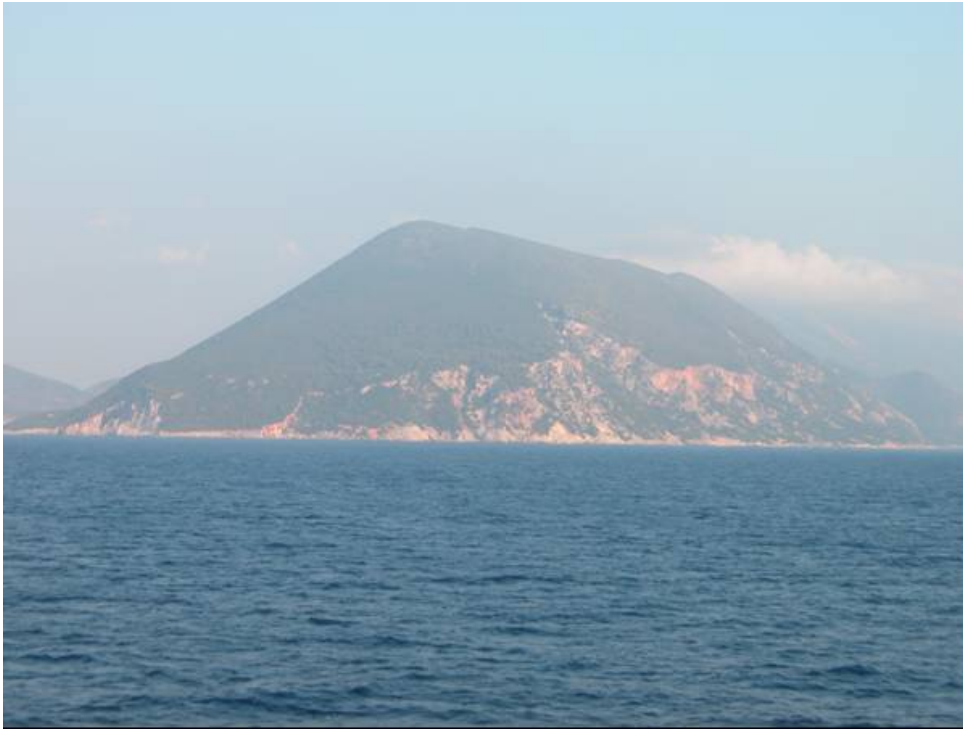
## **Homer described ancient Ithaca as 'low-lying'**

In the *Odyssey* Homer describes ancient Ithaca as follows:

“Around are many islands, close to each other,  
Doulichion and Same and wooded Zacynthos.  
Ithaca itself lies low, furthest to sea  
Towards dusk [i.e. west]; the rest, apart, face dawn and sun [i.e. east].”  
*Odyssey* 9.23-26

For centuries scholars have debated the meaning of the phrase 'Ithaca itself lies low', because today's island of Ithaki is very mountainous, with steep cliffs that drop straight down to the sea (see Fig. 1). The Greek word that is used is *chthamale* which means 'near the ground, on the ground, low, sunken, flat' and it is hard to see how this description could apply to Ithaki.

By contrast, the peninsula of Paliki is generally low-lying. This fact, combined with its location furthest out to sea and to the west, provides strong support for Paliki as the real location of ancient Ithaca. But just how much more *chthamale* is Paliki than Ithaki? Until recently the calculation of the average elevation above sea level of a chosen area of landscape was a time-consuming and error-prone procedure. However, the latest features in Global Mapper's terrain visualisation tool now provide an immediate answer to this 3,000-year old conundrum.



**Fig. 1. Today's island of Ithaki.** The view is towards the north-western cape of Exogi whose summit is at an altitude of 519 metres above sea level.

### Latest Global Mapper software computes comparative island elevations

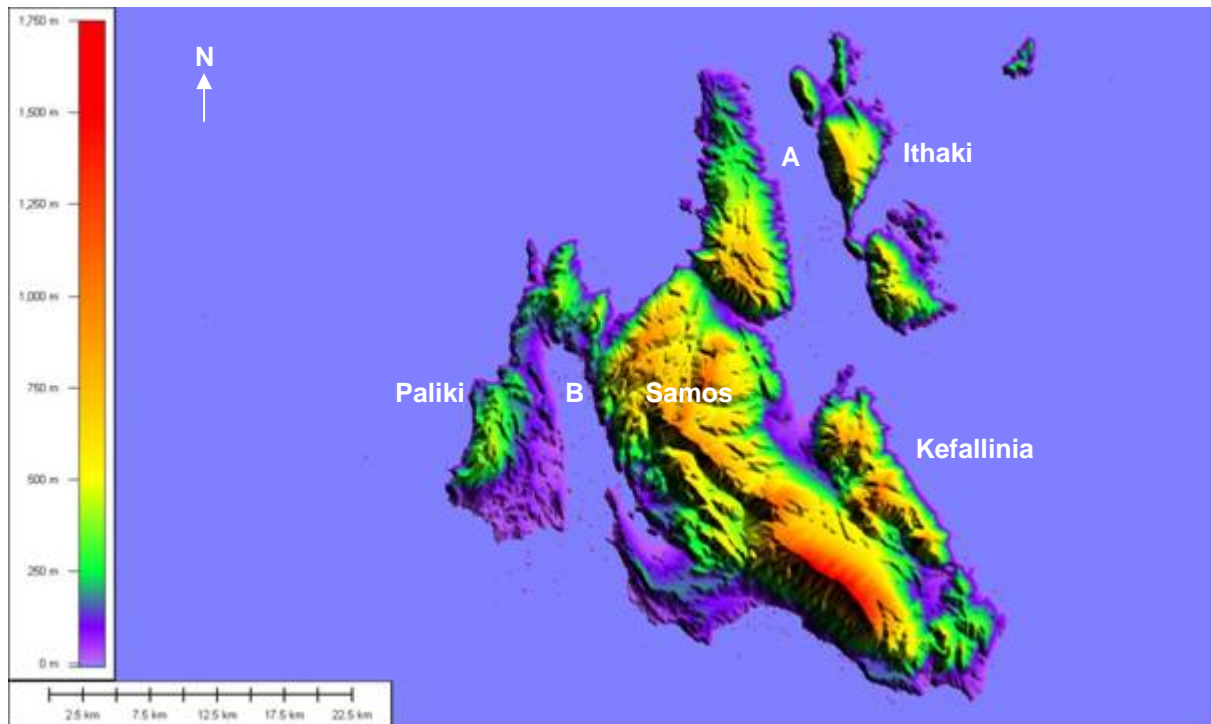
Global Mapper software manipulates Digital Elevation Model data to deliver intuitively clear views of landscape and altitude contours. A database of elevation information on a regular grid pattern is used to generate full-colour images of chosen areas. New facilities launched in Version 7.02 of the software (Dec 1 2005) can now calculate the cubic volume of any user-specified map object. By combining this with existing facilities for calculating the square area of map objects, the average elevation of any landscape item above sea level can be readily computed.

Region	Area km <sup>2</sup>	Volume km <sup>3</sup>	Elevation Highest, m	Elevation Average, m
Ithaki	93	23	810	247
Paliki	130	19	518	146
E Paliki	40	2	170	50
W. Kefallinia	99	44	1065	444

**Fig. 2. Global Mapper values for area, volume and elevation of Homeric locations.** Area is measured in square kilometres and volume in cubic kilometres. Highest elevations are point values within the specified region; average elevations are the result of dividing volume by area. All values are approximate; for region definitions see accompanying maps.

The results of applying these calculations to Ithaki and Paliki are provided at Fig. 2. The average elevation of today's island of Ithaki above sea level is approximately 247 metres, with its highest point being 810 metres above sea level. By contrast, the average elevation of Paliki is only 146 metres with its highest point 518 metres.

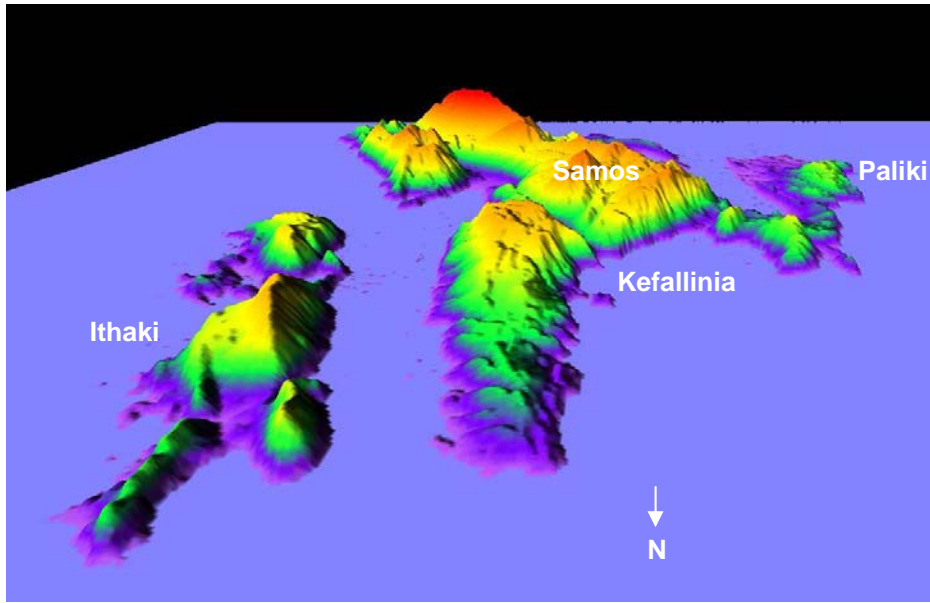
This in itself is a significant difference, but Global Mapper also helps us to make an important additional comparison. Elsewhere in the poem (*Odyssey* 4.845) Homer explains that Ithaca lies on one side of a sea strait and 'rugged Samos' on the other.



**Fig. 3. Global Mapper's Digital Elevation Model chart of Kefallinia and Paliki.** The colours indicate elevation values above sea level via the key diagram on the left. The eastern shore of Paliki is low-lying in comparison with Samos opposite and with most of the island of Ithaki.

Samos is generally agreed to be the main land mass of Kefallinia, so if ancient Ithaca was today's island of Ithaki then this strait would have been the one marked 'A' in Fig. 3. In that case we would expect to find low-lying Ithaki on its east and rugged Samos on its west.

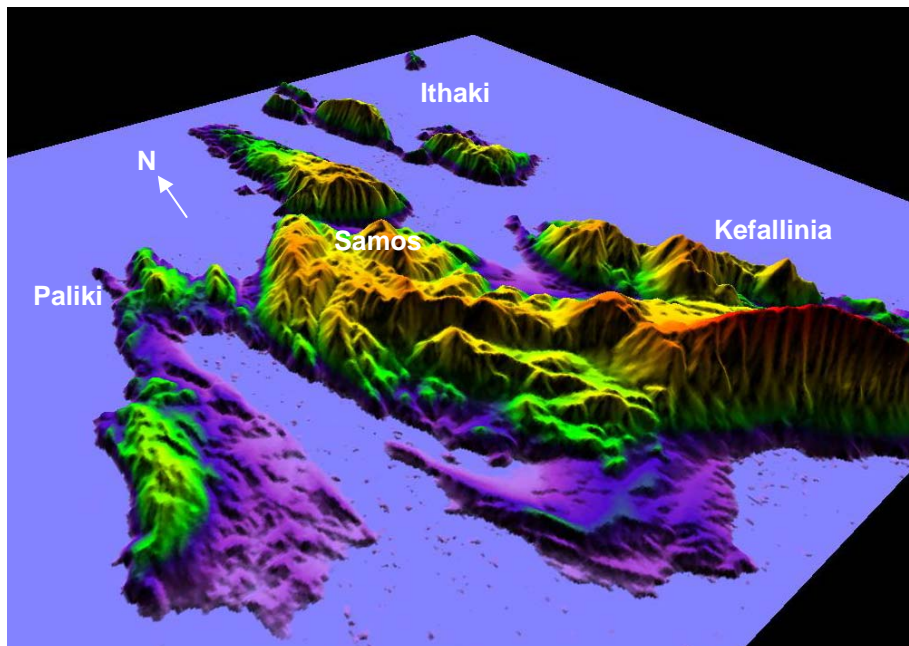
In fact as Fig. 4 indicates, what we see instead is the opposite: Ithaki itself is particularly rugged along this strait, with cliff edges that drop straight down to the sea, whereas the northern peninsular of Samos is relatively low-lying and slopes downwards towards sea level at its northern-most point. This description by Homer of ancient Ithaca cannot therefore be reconciled with the landscape and elevation of Ithaki.



**Fig. 4. Global Mapper view of Kefallinia and Ithaki.** In this contemporary digital elevation model, it is Ithaki which slopes ruggedly down to the sea while the northern tip of Samos is relatively low-lying.

### Strong support for Paliki as homeland of Odysseus

However, if Paliki, not Ithaki, was ancient Ithaca then Homer's description referred instead to the straits marked at 'B' in Fig. 3 (the Gulf of Argostoli). In this case the contrast in elevations is much more pronounced: the eastern side of Paliki slopes right down to the sea with an average elevation of only about 50m above sea level and highest elevation only 170m (Fig. 5), whereas the western side of 'rugged Samos' (the remainder of Kefallinia) averages 444m above sea level with its highest summit at an altitude of 1065m.



**Fig. 5. Global Mapper view of Paliki and Samos.** The landscape complies with its Homeric description: ancient Ithaca (Paliki) is low-lying and opposite Samos' rugged cliffs.



**Fig. 6. View of north-eastern shore of Paliki looking southwards.** The landscape complies with its Homeric description: ancient Ithaca (Paliki) is low-lying.



**Fig. 7. View of south-eastern shore of Paliki looking westwards.** The landscape complies with its Homeric description: ancient Ithaca (Paliki) is low-lying.

## **Next steps in the project**

During 2006 a series of geological and geophysical experiments are planned in Thinia in order to establish when the landslips took place and whether the underlying landscape beforehand was a marine channel. If these tests are successful, archaeological fieldwork can then be conducted on Paliki in the knowledge that Homer's description of Ithaca in the *Odyssey* was not mistaken, as so many experts have believed, but was accurate all along.

## **For further information**

*News about the project and the book:*

<http://www.odysseus-unbound.org/>

*Homer's description of Ithaca:*

<http://www.perseus.tufts.edu/cgi-bin/ptext?doc=Perseus%3Atext%3A1999.01.0136&doc=9.25>

*Strabo's description of Kefallinia:*

<http://www.perseus.tufts.edu/cgi-bin/ptext?doc=Perseus%3Atext%3A1999.01.0198&doc=10.2.15>

## **Downloading and using Global Mapper**

You will need a modern Windows-based PC with a good video card, at least 512 MB of RAM and 50 Mb of hard disk capacity, and a fast Internet link.

Version 7.2 of the software (or later) can be downloaded for a limited free trial from:

<http://www.globalmapper.com/>

Once this has been installed, use the following settings to reproduce these images:

1. File – Download data from the web
2. Choose 'SRTM-30 Plus Download (SRTM-30 with Bathymetry)'
3. Follow the instructions to unzip the data
4. Display within Global Mapper by varying the Tools-Configure-Vertical Options/Shading Options settings.

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