



The Hanish Islands, Red Sea

*A Crossroads Since Prehistoric Times
& a Field for Future Research*

SANDRO BARUCCI

THE HANISH ISLANDS, RED SEA

A Crossroad Since Prehistoric Times & a Field for Future Research

THE HANISH ISLANDS, RED SEA

A Crossroad Since Prehistoric Times & a Field for Future Research

Sandro Barucci

Exceller Open



THE HANISH ISLANDS, RED SEA
A Crossroad Since Prehistoric Times & a Field for Future Research

Copyright © Sandro Barucci, Italy, 2021

All Rights Reserved

Cover design by Exceller Open using resources from Pixabay.com

The book has been published with all reasonable efforts taken to make the material error-free after the consent of the author. No portion of the book should be reproduced, stored in any retrieval system (including but not limited to computers, disks, external drives, electronic or digital devices, e-readers, websites), or transmitted in any form or by any means (mechanical, recording, electronic, digital version, photocopying, or otherwise) without the prior, written permission of the publisher, nor be otherwise circulated in any form of binding or cover other than that in which it is published and without a similar condition being imposed on the subsequent purchaser.

The views and opinions expressed in this book are the author's own and the facts are as reported by him. Neither the publisher nor editor endorse or approve the content of this book or guaranty the reliability, accuracy or completeness of the content published herein and do not make and representations of warranties of any kind, express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose. The publisher or editor shall not be liable whatsoever for any errors, omissions, whether such errors or omissions result from negligence, accident or any other cause or claims for loss or damage of any kind, including without limitation damage arising out of use, reliability, accuracy, sufficiency of the information contained in this book.

ISBN: 978-81-948205-9-8

First published in India in 2021 by Exceller Open



Exceller Open
www.excelleropen.com

ACKNOWLEDGEMENTS

My deepest gratitude goes to all the authors who helped me through this project; I am highly indebted to them. Thanks also to my anonymous reviewers for their help in refining the article. Last but not least, thanks to Sarah Thompson for her precious collaboration.

TABLE OF CONTENTS

Introduction	7
The Early Expansion of Modern Humans	11
Prehistoric Yemen	16
The Age of the Pharaohs	18
Conclusion	19
References	20

INTRODUCTION

The Hanish Islands are situated in the southern Red Sea, extending approximately between 125 and 175 km to the north of the Bab-el-Mandeb Strait (see Figures 1 & 2).



*Figure 1: Position of the Hanish Islands in the Southern Red Sea.
(From Google Earth; data SIO, NOAA, U.S. Navy, NGA, GEBCO, Image Lands at, Copernicus)*

The archipelago is part of the State of Yemen and lies about 40 km from the African coast and about 30 km from the coast of Asia.

From a geological point of view, the islands are of volcanic origin and, since they rise on the Asian continental shelf, form part of Asia.

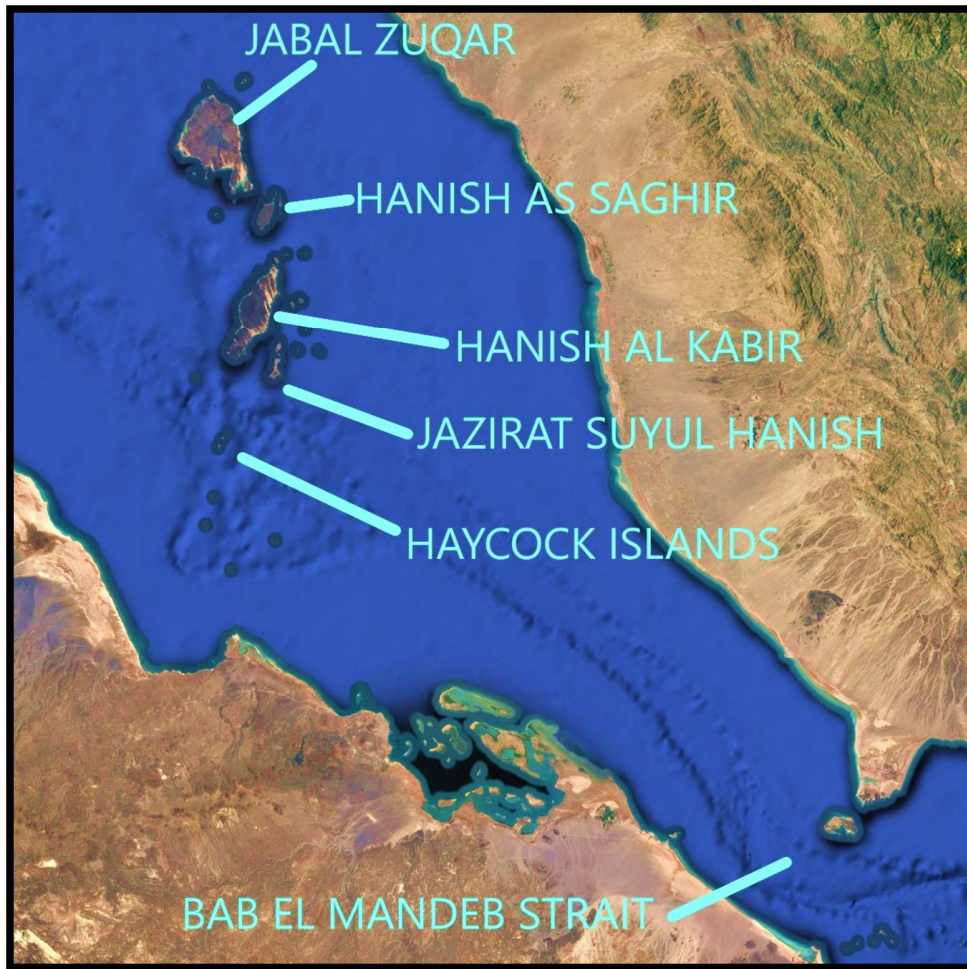


Figure 2: The Hanish Islands and the Haycock Islands at Present Sea Level.
(From Google Earth; data SIO, NOAA, U.S. Navy, NGA, GEBCO, Image Lands at, Copernicus)

The highest elevation, rising to 624 metres above sea level, is found on the main island of Jabal Zuqar, in comparison, a height of 407 metres is found on Hanish al-Kabir, the second largest island (Krupp et al. 2006). Several small islands lie around them. On clear days the two highest points are visible from a considerable distance.

The archipelago is practically uninhabited, apart from some military personnel and non-resident fishermen. Around 70 species of fish have been documented in the area, and intense underwater activity is carried out to gather sea cucumbers.

In modern times “there is no surface freshwater, and the dew-dependent vegetation is extremely scarce” (Krupp et al. 2006). Rainfall is very rare, in contrast with the more humid cycles in the Pleistocene (Parker, 2010; Nicholson, 2020). Despite this hostile environment, there are records of the Mountain Gazelle, *Gazella Gazella*, in Hanish al-Kabir (Masseti et al. 2015).

This area of the southern Red Sea has received considerable attention from scholars as a possible southern expansion route from Africa, first by the earliest Hominins and later by *Homo Sapiens*, the Anatomically Modern Human (AMH) (e.g. Lambeck et al. 2011; Bailey et al. 2017; Momber et al. 2019). It is known that during the Pleistocene a series of markedly different climatic

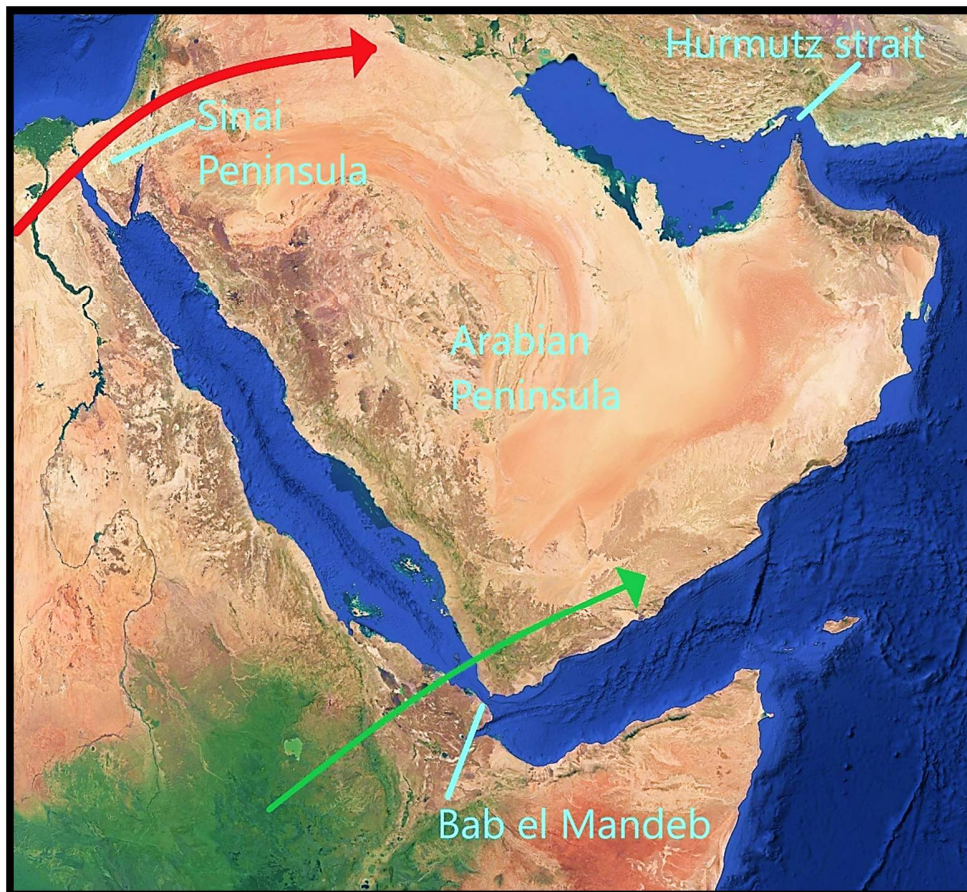
Introduction

phases took place (e.g. Parker, 2010) and the sea levels during certain phases were much lower than they are now.

During the Palaeolithic, land corridors were formed several times, which provided opportunities for human dispersal out of the African continent (Lambeck et al. 2011). These corridors may have been additional to the northern corridor, the most widely accepted pathway that led towards the Nile Delta and then east along the Mediterranean coast and the Sinai region.

This northern route is not under discussion; instead, this article focuses on the second route which, as already mentioned, occurred at various successive intervals following the glacial cycles of the Palaeolithic.

Furthermore, in more recent eras, the southern Red Sea was sailed by numerous naval, military and trade expeditions and that resulted in the exchange of contacts between the two continents.



*Figure 3: The Red Dashed Arrow Represents the Hypothesis of a Northern Corridor towards the East from Africa in the Palaeolithic. The Green Arrow Represents the Hypothesis of a Southern Corridor.
(From Google Hearth; data SIO, NOAA, U.S. Navy, NGA, GEBCO, Image Lands at, Copernicus)*

A clear example of this is the Neolithic trade of obsidian. Many types of obsidian found uncovered in Yemen originated from volcanoes in East Africa (Francaviglia, 1990; Francaviglia & Ferretti, 2016; Khalidi et al. 2010; Khalidi et al. 2013). Durable enough to survive intact for

millennia, obsidian provides valuable archaeological evidence. However, those who traded this precious stone, particularly prized in the Neolithic, did so in exchange for other commodities of which there may be no trace today. Furthermore, the same boats probably also carried other commodities in both directions. These themes will be further developed later in the paper.

This work aims to highlight the position of the Hanish Islands at a crossroads of communications from prehistoric times to the Egyptian Dynastic era. It does not claim that the southern Red Sea was the main dispersal route of AMH out of Africa, partly because of recent discoveries that necessarily call for a general revision of the geography of *Homo sapiens* in this continent. Human remains at Jebel Irhoud in Morocco date from 300 ky BP, 300 thousand years before present (Hublin et al. 2017). It is therefore likely that *Homo sapiens* was present throughout the continent much earlier than previously hypothesized, and other dispersal routes must therefore be reconsidered.

THE EARLY EXPANSION OF MODERN HUMANS

Homo Sapiens, the Anatomically Modern Human, is documented at the sites of Omo Kibish, dated to ca. 195 ky BP (McDougall et al. 2005), and Herto, dated to ca. 160 ky BP (White et al. 2003). Both of these sites are located in central-western Africa, in present-day Ethiopia (Figure 2). The theory of an early expansion of AMH eastwards and of a southern corridor suggests crossing of the Bab el Mandeb Strait when this was made favourable by low sea levels, as mentioned above. During the millennia following the colonisation of Arabia, the route may have extended towards the Strait of Hormuz, also crossed during periods of suitable conditions, and onwards to India.

Concrete evidence of Anatomically Modern Humans dating from 50 ky BP (O'Connell et al. 2018) is found at the end of the route in Australia, reached after crossing a considerable stretch of sea from the Island of Timor. Oppenheimer called this pathway “the great arc of dispersal of modern humans” (2009), shown here in schematic form in Figure 3. In subsequent work Oppenheimer supports the hypothesis of the southern corridor (2012) and concludes by stating that: “The genetic, climatic and archaeological evidence logically suggests a single southern exit of AMH from Africa, probably during early OIS 4”, in other words, shortly after 70 ky BP.

Nowadays, the idea of a single dispersal out of Africa is no longer valid, and feasible timings of dispersal events are thought to be earlier than previously hypothesized (e.g. Bae et al. 2017).

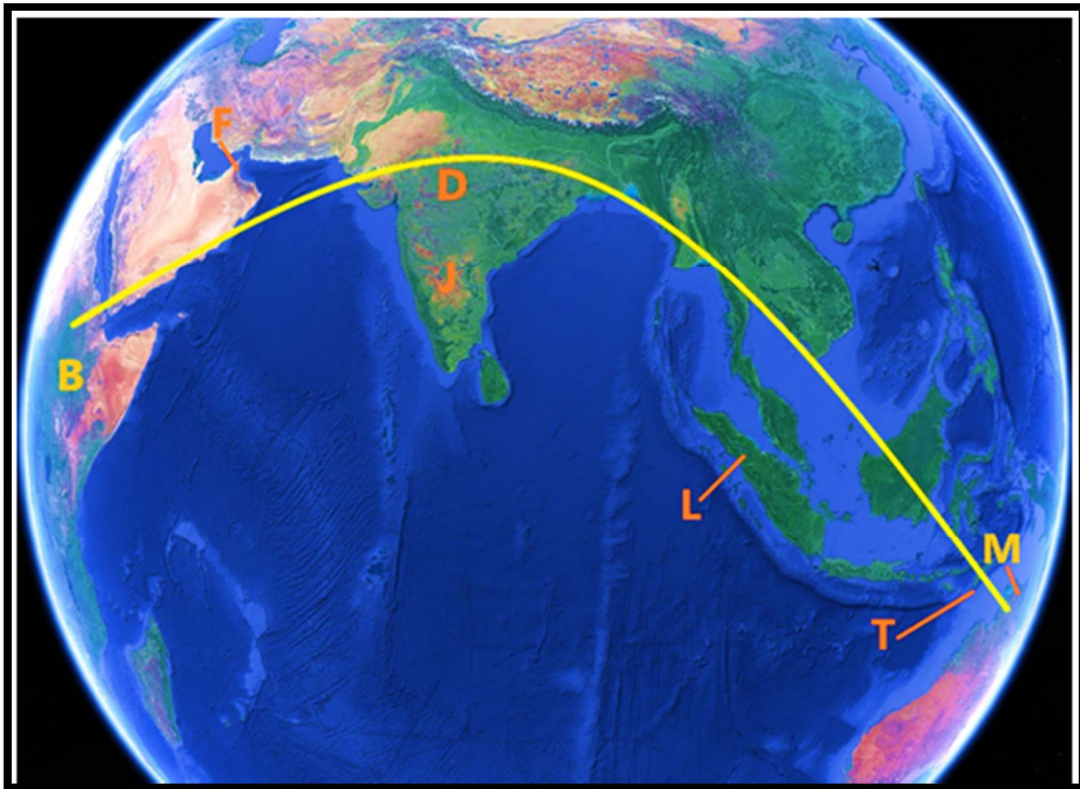
If further confirmed, the presence of AMH in Madjedbebe, north Australia, would date to 65 ky BP (Clarkson et al. 2017; O'Connell et al. 2018), while other dates along “the great arc” would confirm a very early expansion of *Homo Sapiens*.

SiteFAY-NE1 at Jebel Faya in the United Arab Emirates (Figure 3) is one of the examples: the “C” assemblage, dated by OSL, dates from 125 ky BP, while the lithic finds have similarities with those of East Africa (Armitage et al. 2011).

Others are found at the site of Dhaba in northern India, occupied in ca. 80 ky BP (Clarkson et al. 2020), and at the settlement of Jwalapuram (Figure 3) in southern India, antecedent to 74 ky BP (Petraglia et al. 2007; Haslam et al. 2012). “The stone tool evidence is most consistent with contemporaneous *Homo sapiens* technologies in Africa and to the east of South Asia” (Haslam, 2012).

Besides, the presence of AMH 73-63 ky BP has been confirmed at the Sumatran Pleistocene cave of Lida Ajer (Westaway et al. 2017).

Zone B of Hanish Islands and Bab el Mandeb in Figure 3 indicates the possible access route between Africa and Asia via the southern Red Sea.



*Figure 4: The “great arc” of Dispersal, and Diagram of the Sites Cited in the Text;
In Parenthesis are the Dates at which the Presence of AMH is Documented.
(From Google Hearth; data SIO, NOAA, U.S. Navy, NGA, GEBCO, Image Lands at, Copernicus)*

- B: Bab-el-Mandeb and Hanish Islands
- D: Dhaba, India (80 ky)
- F: Jebel Faya, United Arab Emirates (125 ky)
- J: Jwalpuram, India (75 ky) L: Lida Ajer, Sumatra (73-63 ky)
- T: Island of Timor M: Madjedbebe, Australia (65 ky)

The current sea level in the Hanish Islands area is lower than it is in both the sea to the north and the Gulf of Aden to the south.

Considering that vertical tectonic movements here have not significantly altered the situation, Lambeck was able to publish his analysis of the effects of lowering the sea level during the Palaeolithic (Lambeck et al. 2011).

Even with a decrease in sea level of only 50 metres, the channel widths between Africa and Asia immediately to the south of Hanish al Kabir (zone A in Fig. 4) are less than 5 km during the periods indicated in Table 1 below.

The Early Expansion of Modern Humans

From About (Ky)	To About (Ky)
362	338
300	295
279	242
232	228
189	131
110	110
96	94
86	86
68	61
55	55
43	35
32	12

Table 1: Periods when Channel Widths between Africa and Asia to the South of Hanish al-Kabir Were Less than 5 Km (Following Lambeck et al. 2011 fig. 24 A-B)

It is clear that favourable conditions for a possible crossing were present in many successive periods, and that these distances of less than 5 km did not require technically developed watercraft. Besides, the bathymetry of the area also leads to the following three considerations:

- The crossing was probably easier when made by passing from one island to another to the south of Hanish al-Kabir (zone A in Figure 4) rather than to Bab-el-Mandeb
- During the periods indicated, it is probable that the Hanish Islands were connected to the coast of Yemen, forming part of the mainland
- The central Red Sea has always been connected to the Gulf of Aden, and there is no evidence to suggest that a land bridge formed between Africa and Asia during the period considered in the table

There is no firm evidence of crossings from the Eritrean coast to Yemen occurring in any of the periods indicated in Table 1.

“But we know from the evidence of early human expansion into Australia and New Guinea that sea crossings involving some form of watercraft were being conducted regularly at least 50,000 years ago and to Flores Island at 0.8 million years. There is no reason to deny that possibility in other parts of the world” (Bailey et al. 2017).

Therefore, AMH would have reached the nearby coast of the Arabian Peninsula at several different times and settled there before expanding further north and eastwards. The territory

around the Hanish Islands, periodically an integral part of the Arabian coast, could, therefore, have been occupied by Palaeolithic settlements.

The climatic environment of the Arabian Peninsula during the Pleistocene underwent long humid phases which were favourable to human sustenance, both in terms of water resources and the availability of food (Parker, 2010; Nicholson, 2020). This factor made the success of the expansion eastwards more likely.

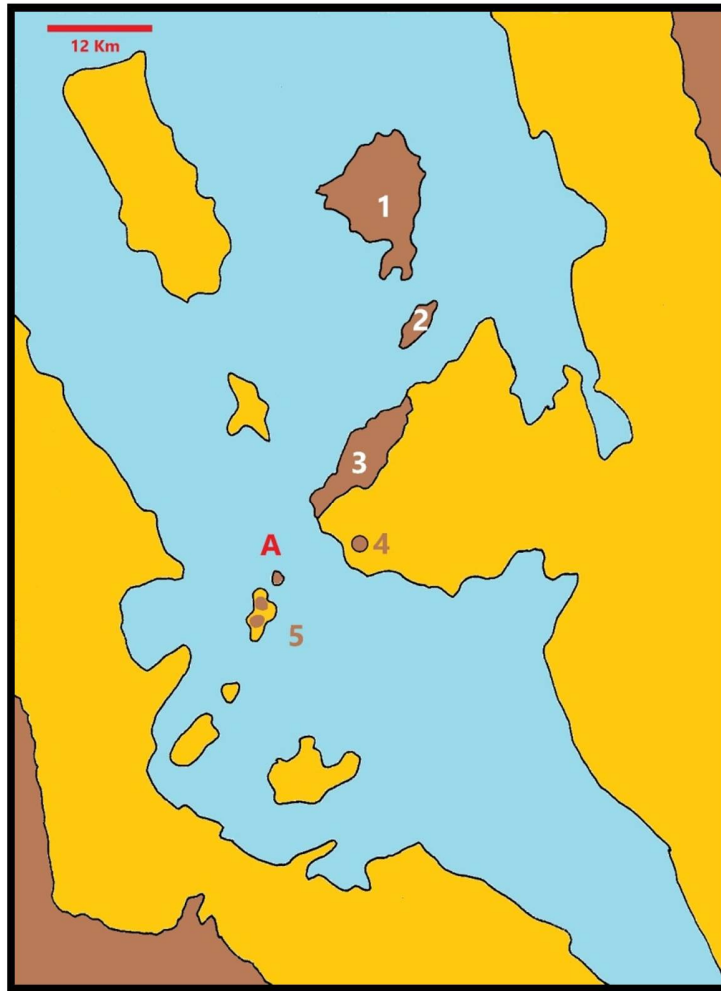


Figure 5: Exposed Lands when Sea Level was -50 m. (Yellow Colour);
Lands above Present Sea Level (Brown Colour)

Bathymetry of the Southern Red Sea, following the Admiralty chart 00143, 2017 (Scheme by the Author)

Currently existing islands:

- 1- Jabal Zuqar
- 2- Hanish as Saghir
- 3- Hanish al Kabir
- 4- Jazirat Suyul Hanish
- 5- Haycock Islands

The Early Expansion of Modern Humans

Nowadays, much of the southern Arabian Peninsula is considered a difficult barrier to cross due to its arid climate and vast areas of barren desert. Nevertheless, research has shown that freshwater lakes existed in southern Arabia during several phases of the Palaeolithic, “ca. 80 ka (MIS 5a), ca. 100 ka (MIS 5c), and ca. 125 ka (MIS 5e), making this region suitable for occupation by AMH” (Rosembergh et al. 2011).

Today’s largest desert on Earth is the Rub' al-Khali, “the Empty Quarter” between southern Saudi Arabia, Oman and Yemen, covering an area of around 640,000 Km² and characterised by extreme climatic conditions. However, research has shown that there were palaeo lakes here in the Pleistocene, and remains of freshwater fish and shells have been found (Matter et al. 2015). Therefore, during the humid phases, the environment could have provided conditions that were favourable to human settlement and expansion eastwards from Africa.

From initial observations there would seem to be no correspondence between the phases during which the Red Sea crossing was more comfortable (Table 1) and the periods of more humid climate indicated above.

However, since both categories of data can be considered to be somewhat approximate, it is feasible to conjecture that phases may have existed in which both the sea level and environmental conditions were indeed favourable at the same time (Lambeck, 2011).

Alternatively, one might conjecture that, in the presence of ideal climatic conditions, humans were capable of crossing the channel of approximately 30 km via the Bab-el-Mandeb Strait or via the Hanish Islands as early as the Pleistocene. This debate regarding several suggested crossings in these and other seas has been going on for decades: adequate watercraft would have been necessary to cover such a distance, especially when carrying women and children to an area of future settlement.

In addition to the previously-cited arrival of the first hominins in Flores, a subject of wide discussion, the author has followed the lengthy debate on a similar theme regarding the Mediterranean island of Crete (e.g. Kopaka et al. 2009; Runnels et al. 2014; Leppard et al. 2017; Strasser, 2018). Crete is the largest of the Greek islands and has been isolated from the mainland for the last 5 million years.

Simultaneously, solid evidence indicates hominins’ arrival during the Palaeolithic, implying the crossing of a wide stretch of sea. How this was possible, and what kinds of watercraft were used, is not known.

Similarly, the question of when, how, and by what means the crossing of the Strait of Gibraltar was made has not yet been entirely solved (e.g. Bednarik, 1999); could this be another route “out of Africa”?

Space constraints prevent us from continuing this debate here, but it is a subject of great interest for the history of navigation and humanity itself.

PREHISTORIC YEMEN

As already stated, in geological terms, the Hanish Islands are found on the Asiatic platform and, during periods of low levels of the Red Sea, it was joined to the mainland of present-day Yemen.

This country provides ancient evidence of human presence at numerous Acheulean sites in various areas (e.g. Amirkhanov, 1994; Whalen and Schatte, 2007; Amirkhanov, 2018). In the region facing the Gulf of Aden, around 600 km east-north-east of the Bab-el-Mandeb Strait, the Al Guza cave has been declared the most ancient site on the Arabian Peninsula (Amirkhanov, 2008; Amirkhanov et al. 2019). The deepest layer (N) is confirmed to precede the Brunhes-Matuyama boundary, ca. 800 ky BP, and may be correlated to the beginning of Olduvai, therefore dating to ca. 1.8 My BP.

The coastal plain region bordering the Red Sea is known as Tihamah. It is a strip of land lying between the highlands to the east and the shoreline to the west and is, therefore, the closest land area to the Hanish Islands. Here too there are numerous traces from prehistoric times.

The Wadi Surdud lies between the hills that link the Tihamah coastal plain and the highlands, approximately 150 km north-east of the Hanish Islands. Here, site Shi'bat Diya 1 (SD1) falls into the Middle Pleistocene (Delagnes et al. 2012; Sitzia et al. 2012; Amirkhanov et al. 2019), dated to 55 ky BP. The substantial collection of finds includes 5488 artefacts of over 2 cm in size, and 97 faunal fragments including remains of bovidae, equidae and suidae (Delagnas et al. 2012).

The dating indicated refers to a period of total aridity, one which was, in theory, unfavourable to settlements in this new land (Rosembergh, 2011). Nevertheless, AMH had found a means of settling in these foothills for a considerable period of time.

“Even during arid periods, the region provided sustainable sources of freshwater and attractive habitats. It may have functioned as a core region where populations retreated to during harsher periods” (Delagnes et al. 2012).

During research carried out in 1990 in the southern Tihamah region, an American-Yemeni team identified numerous sites, the oldest of which were Acheulean of the Middle Pleistocene (Whalen and Pease, 1991).

The characteristics of the artefacts found covered a vast time span, representing the Lower, Middle, and Upper Palaeolithic.

There are numerous sites in the Tihamah region covering subsequent periods. Khalidi (2018) cites 160 of them relating to the Early to Middle Holocene and from the Neolithic to the Iron Age.

One such site is at Ash Shumah (Tosi, 1985; Cattani & Bökönyi, 2002), dated to the 7th millennium BC. Found here is a shell midden typical of prehistoric coastal areas, made up of *Terebralia Palustris*, a mollusc widely found in mangrove environments and a remarkable source of food for humans because of its considerable size (Houbrick, 1991). Other animal remains found here include numerous examples of wild ass (*Equus Africanus*). A similar shell mound at Al-Madaniyah has been dated to the fifth millennium BC (Tosi, 1985; Cattani and Bökönyi, 2002).

Prehistoric Yemen

The aim of this article, however, is not to describe the entire archaeological history of Yemen, but instead to underline the vast time span covered by the well-attested presence of the *Homo* genus in the region.

For geographical reasons, it is also useful to mention here the site of Al-Midamman. Situated near the coast opposite the Hanish Islands, it was identified by the Canadian Archaeological Mission of the Royal Ontario Museum in 1997 (Keall, 1998). The settlement is dated to as early as the 10th millennium cal. BP, when the environment was favourable to the development of mangroves and the gathering of *Terebralia Palustris*; remains of these gastropods have been placed between 9270-6990 cal. BP (Khalidi et al.2018). The site also revealed a wealth of pottery and lithic remains, including obsidian. In addition, the excavation brought to light two megaliths of great interest dating from between the fifth and fourth millennium BP.

Obsidian plays a significant role in understanding the relationships between the Tihamah region and the Horn of Africa. 140 obsidian artefacts unearthed at Al-Midamman were analysed using Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS). The material from 95% of the samples was revealed to be of African provenance (Ethiopia and Eritrea), while only 5% of the samples originated from Yafa' in the Yemen Highlands (Khalidi et al. 2018).

It is, therefore, possible to affirm that studies of obsidian provide the earliest tangible evidence of regular navigation between the Horn of Africa and the Tihamah region: "The introduction of African obsidian on the shores of the Tihamah goes back to sometime in the sixth millennium BC and its presence is confirmed until the second to first millennia BC" (Khalidi, 2009).

Those supplying obsidian on the African shores must certainly have received other commodities from Asia in return; other goods sought after in Asia probably travelled with the obsidian. However, by its very nature, the black volcanic glass has survived millennia to provide us with the evidence we have today.

THE AGE OF THE PHARAOHS

The history of Dynastic Egypt contains several references to naval expeditions on the Red Sea, heading for Punt's mythical destination (Phillips, 1997). Perhaps the most well-known of these is the one organised by Queen Hatshepsut of the Eighteenth Dynasty in around 1470 BC; the reliefs in her temple at Deir el-Bahari immortalise the event.

However, the pharaoh Sahure commanded a naval expedition to the Land of Punt as early as the Fifth Dynasty, in the mid-third millennium BC, as testified by his Pyramid Causeway at Abusir (El-Awadi, 2009). The goods the expedition returned with included native people and exotic items like baboons and precious myrrh.

Many other expeditions have been documented, the last one reported in the Harris Papyrus I (papyrus British Museum EA9999) regarding the reign of Ramses III, XX Dynasty (Breasted, 1906). Nobody has conclusively established where the Land of Punt actually was, although it is certainly reasonable to think that it was a land to the south, on the Red Sea, or perhaps even beyond the Babel-Mandeb. It is hypothesized here, considering the wide time span of the expeditions – covering about a millennium – that the development of naval and geographical knowledge during this time may have resulted in the reaching of increasingly far-off destinations. It is likely that the name Punt was attributed to various different places reached progressively in the far south of the Red Sea and maybe even beyond.

These places would certainly have included the Tihamah region. Concrete evidence has been uncovered from the Egyptian port of Mersa/Wadi Gawasis from where many of the expeditions departed (Bard and Fattovich, 2015); among other African finds, the latter scholars list “Malayba ware from the Aden region of southern Yemen, and Sabir ware from the Yemeni Tihamah”.

It is likely that the captain of an expedition reaching the southern Red Sea would have seen the Hanish Islands and the Tihamah and that he would have looked for opportunities for new commodities or for shelter when this was needed.

CONCLUSIONS

For millennia the Hanish Islands represented a crossroad in the history of human communications. This affirmation does not represent any proof of concrete evidence left here by history. The article aims to highlight why a large scale campaign of archaeological research is highly desirable in this area and the surrounding sea.

We are well aware of the great technical, financial and political difficulties that hinder such a project. However, recognition of these difficulties should not alter the acknowledgement that such a project needs to be carried out.

A well-known example from the Mediterranean is worth citing in order to better illustrate the significance of this article: on the island of Pantelleria, in the middle of the Sicilian Channel, no evidence was known of human presence during the Neolithic and preceding eras. In 2004 an underwater expedition, which was not searching for artefacts from this remote era, identified some more recent amphorae in the bay of Cala Tramontana and reported the site. Subsequent underwater archaeological expeditions, began in 2011, brought to light an extraordinary assemblage of lithic remains at a depth of between 18 and 21 metres (Abelli, 2012; Abelli et al. 2014). Taking into consideration the palaeo-sea levels, the site was dated 9.6 – 7.7 ky BP, and it was proven that, from at least these times, the island was frequented by mariners who reached it by navigating stretches of sea of several tens of kilometres. In fact, during the Last Glacial Maximum and subsequent millennia up to the present day, Pantelleria has never been connected to other landmasses (Prampolini et al. 2017). A rise of 25 metres in the sea level had hidden an important archaeological heritage, as well as the true history of the Sicilian Channel and pre-Neolithic navigation.

Of course, nobody can guarantee the repetition of such an event, but further research in and around the Hanish Islands, including underwater surveys in particular, would seem to be highly opportune.

REFERENCES

- i. Abelli, Leonardo, (2012), Le indagini archeologiche subacquee a Cala Tramontana e a Cala Levante. In: *Archeologia subacquea a Pantelleria; Ante Quem*, ISBN 978-88-7849-072-7
- ii. Abelli, Leonardo, Agosto, Maria Vittoria, Casalbore, Daniele, Romagnoli, Claudia, Bosman, Alessandro, Antonioli, Fabrizio, Pierdomenico, Martina, Sposato, Andrea, Chiocci, Francesco L., (2014), Marine geological and archaeological evidence of a possible pre-Neolithic site in Pantelleria Island, Central Mediterranean Sea. *Geological Society, London, Special Publications*, V. 411, pp. 97-110. <https://doi.org/10.1144/SP411.6>
- iii. Armitage, Simon & Jasim, Sabah & Marks, Anthony & Parker, Adrian & Usik, Vitaly & Uerpmann, Hans-Peter. (2011). The Southern Route "Out of Africa": Evidence for an Early Expansion of Modern Humans into Arabia. *Science* V.331, pp. 453-456. DOI: 10.1126/science.1199113.
- iv. Bae, Christopher J. Douka, Katerina, Petra, Michael D. (2017), On the origin of modern humans: Asian perspectives. Vol. 358, Issue 6368. DOI: 10.1126/science.aai9067
- v. Bailey Geoffrey N., Sakellariou, Dimitris, Alsharekh, Abdullah M. et al. (2017) Africa-Arabia Connections and Geo-Archaeological Exploration in the Southern Red Sea: Preliminary Results and Wider Significance. In: Bailey G., Harff J., Sakellariou D. (eds) *Under the Sea: Archaeology and Palaeo landscapes of the Continental Shelf*. Coastal Research Library, V. 20. Springer. DOI: 10.1007/978-3-319-53160-1_23
- vi. Clarkson, Chris, Jacobs, Zenobia, Marwick, Ben et al. (2017) Human occupation of northern Australia by 65,000 years ago. *Nature* V. 547, pp. 306–310. DOI: 10.1038/nature22968
- vii. Clarkson, Chris, Harris, Clair, Li, Bo et al. (2020), Human occupation of northern India spans the Toba super-eruption ~74,000 years ago. *Nature Communications* 11, n° 961. DOI: 10.1038/s41467-020-14668-4
- viii. Crassard, Rémi , Hilbert, Yamadù H., Preusser, Frank, Wulf, Gerwin, Schiettecatte, Jérémie (2019) Middle Palaeolithic occupations in central Saudi Arabia during MIS 5 and MIS 7: new insights on the origins of the peopling of Arabia. *Archaeological and Anthropological Sciences* V. 11, pp. 3101–3120. DOI: 10.1007/s12520-018-0743-2
- ix. Francaviglia Vincenzo (1990) Les gisements d'obsidienne hyperalcaline dans l'ancien monde: étude comparative. In: *Revue d'Archéométrie*, n°14, pp. 43-64. DOI: 10.3406/arsci.1990.882
- x. Francaviglia, Vincenzo, Ferretti, Marco (2016), Obsidian Trade across the Red Sea in Neolithic Times: The Case for Tihāmah Sites. Abstract from: "International Obsidian Conference, Lipari, 1-3 June 2016".
- xi. GEBCO Compilation Group (2020), GEBCO 2020 Grid. DOI:10.5285/a29c5465-b138-234d-e053-6c86abc040b9.
- xii. Haslam, Michael, Clarkson, Chris, Roberts, Richard G. et al. (2012). A southern Indian Middle Palaeolithic occupation surface sealed by the 74 ka Toba eruption: Further evidence from Jwalapuram Locality 22. *Quaternary International*, V. 258, 2012, pp. 148-164. DOI: 10.1016/j.quaint.2011.08.040.

References

- xiii. Hublin, Jean Jacques, Ben-Ncer, Abdelouahed, Bailey, Shara E. et al., New fossils from Jebel Irhoud, Morocco and the pan-African origin of *Homo sapiens*. *Nature* 546, 289–292 (2017). DOI: 10.1038/nature22336
- xiv. Khalidi, Lamya & Inizan, Marie-Louise & Gratuze, Bernard & Crassard, Rémy. (2013). Considering the Arabian Neolithic through a reconstitution of interregional obsidian distribution patterns in the region. *Arabian archaeology and epigraphy*, V.24, pp. 59-67. DOI: 10.1111/aae.12020.
- xv. Khalidi, Lamya, Oppenheimer, Clive, Gratuze, Bernard, Boucetta, Sophie, Sanabani, Ali. (2010). Obsidian sources in highland Yemen and their relevance to archaeological research in the Red Sea region. *Journal of Archaeological Sciences* V. 37, pp. 2332-2345. DOI: 10.1016/j.jas.2010.04.007.
- xvi. Kopaka, Katérina & Matzanas, Christos (2009). Palaeolithic industries from the island of Gavdos, near neighbour to Crete in Greece. *Antiquity Project Gallery* 83/321.
- xvii. Krupp, Friedhelm, Apel, Michael, Hamoud, Aref, Schneider Wolfgang, Zajonz, Uwe, (2006), Zoological survey in the Red Sea coastal zone of Yemen. *Fauna of Arabia* V. 21, pp. 11–32,
- xviii. Lambeck, Kurt, Purcell, Anthony, Flemming, Nicholas. C., Vita-Finzi, Claudio, Alsharekh, Abdullah M., Bailey, Geoffrey N. (2011) Sea level and shoreline reconstructions for the Red Sea: isostatic and tectonic considerations and implications for hominin migration out of Africa. *Quaternary Science Reviews*, Volume 30, Issues 25–26, pp. 3542-3574,
- xix. Leppard, Thomas & Runnels, Curtis. (2017). Maritime hominin dispersals in the Pleistocene: Advancing the debate. *Antiquity*. V.91, pp. 510-519. DOI:10.15184/aqy.2017.16.
- xx. Masseti, Marco, De Marchi, Giuseppe, Chiozzi, Giorgio, (2015), Forbidden islands. The absence of endemics among the insular non-volant terrestrial mammalian fauna of the Red Sea. *Natural History Sciences*. V. 2, pp. 101-130. DOI: 10.4081/nhs.2015.253.
- xxi. Matter, Albert, Neubert, Eike, Preusser, Frank et al. (2015). Palaeo-environmental implications derived from lake and sabkha deposits of the southern Rub' al-Khali, Saudi Arabia and Oman. *Quaternary International*. V. 382. DOI: 10.1016/j.quaint.2014.12.029.
- xxii. McDougall, Ian, Brown, Francis H, Fleagle, John G. (2005) Stratigraphic placement and age of modern humans from Kibish, Ethiopia. *Nature* V. 433, pp. 733–736. DOI: 10.1038/nature03258
- xxiii. Momber Garry, Sakellariou Dimitris, Rousakis Grigoris, Bailey Geoff N. (2019) The Multi-disciplinary Search for Underwater Archaeology in the Southern Red Sea. In: Rasul N., Stewart I. (eds) *Geological Setting, Palaeo environment and Archaeology of the Red Sea*. Springer, Cham. DOI: 10.1007/978-3-319-99408-6_27.
- xxiv. Nicholson, Samuel L., Pike, Alistair W.G., Hosfield, Rob, et al. (2020), Pluvial periods in Southern Arabia over the last 1.1 million-years. *Quaternary Science Reviews*, V. 229, pp. 106-112, DOI: 10.1016/j.quascirev.2019.106112.
- xxv. Oppenheimer, Stephen, (2009), The great arc of dispersal of modern humans: Africa to Australia. *Quaternary International*, V. 202, Issues 1–2, pp. 2-13. DOI:
- xxvi. <https://doi.org/10.1016/j.quaint.2008.05.015>
- xxvii. Oppenheimer, Stephen, (2012), Out-of-Africa, the peopling of continents and islands: tracing uniparental gene trees across the map. *Philosophical transactions of the Royal*

- Society of London. Series B, Biological sciences vol. 367, 1590, pp. 770-784. DOI: 10.1098/rstb.2011.0306
- xxviii. Parker, Adrian G. (2010) Pleistocene Climate Change in Arabia: Developing a Framework for Hominin Dispersal over the Last 350 ka. In: Petraglia M., Rose J. (eds) *The Evolution of Human Populations in Arabia. Vertebrate Paleobiology and Paleoanthropology*. Springer, Dordrecht. DOI: 10.1007/978-90-481-2719-1_3
- xxix. Petraglia, Michael, Ravi Korisettar, Nicole Boivin, Christopher Clarkson, et al. (2007) Middle Paleolithic Assemblages from the Indian Subcontinent before and after the Toba Super-Eruption." *Science* 317, no. 5834: pp. 114-116.
- xxx. Prampolini, Mariacristina, Gauci, Christopher, Micallef, Anton S., Selmi, Lidia, Vandelli, Vittoria, Soldati, Mauro, (2017), Geomorphological mapping of terrestrial and marine areas, northern Malta and Comino (central Mediterranean Sea). *Journal of Maps*, V.13, Issue 2, pp. 457-469. DOI: 10.1080/17445647.2017.1327507.
- xxxi. Rosenberg, Thomas M., Preusser, Frank, Fleitmann, Dominik et al. (2011). Humid Periods in Southern Arabia: Windows of Opportunity for Modern Human Dispersal. *Geology*. 39. 10.1130/G32281.1.
- xxxii. Runnels, Curtis, McCoy, Floyd, Bauslaugh, Robert & Murray, Priscilla. (2014). Palaeolithic research at Mochlos, Crete: new evidence for Pleistocene maritime activity in the Aegean. *Antiquity Project Gallery* 88(342)
- xxxiii. Strasser, Thomas F., Murray, Sarah C., van der Geer, Alexandra, et al. (2018), Palaeolithic cave art from Crete, Greece, *Journal of Archaeological Science: Reports*, V. 18, pp. 100-108. DOI: 10.1016/j.jasrep.2017.12.041.
- xxxiv. Westaway, Kira, Louys, Julien, Awe, Rokus Due, et al. (2017). An early modern human presence in Sumatra 73,000–63,000 years ago. *Nature*. 548. DOI: 10.1038/nature23452.
- xxxv. White, Tim, Asfaw, Berhane, DeGusta, David, *et al.* (2003), Pleistocene *Homo sapiens* from Middle Awash, Ethiopia. *Nature* 423, 742–747. DOI: 10.1038/nature01669

The Hanish Islands are situated in the southern Red Sea. The aim of this book is to highlight the position of the Hanish Islands at a crossroads of communications from prehistoric times to the Egyptian Dynastic era. So further archaeological research would seem to be highly opportune.



Sandro Barucci was born and lives in Florence, Italy. He has obtained a master's degree in Mechanical Engineering at the University of Bologna. He is interested in ancient shipbuilding and shipping. He has published books in Italian and papers in English about nautical archaeology and prehistoric technologies. The aim of his work is to study in depth the ability of our ancestors to cross the seas and to establish contacts with distant people.



www.excelleropen.com

