# Classical Medicine 1

Towards the latter part of the Bronze Age contacts appear to have been made with early Phoenicians seafarers. These initially limited themselves to the utilization of the Islands as a port of call, but later gradually colonized the Islands. Literary sources bearing on the history of the Maltese Islands during the Phoenician period are extremely scanty. The earliest archaeological documentation for the Phoenician colonization of Malta dates to the late eight to early seventh century BC The Phoenician influence on the Islands was continued under the Cartaginians (circa 550 BC) who followed the steady decline of Phoenicia under the Assyrian and Neo-Babylonian empires. The archaeological record of this latter phase remains Punic in type, though a number of Hellenistic importations from Sicily and Southern Italy are increasingly noticeable. There is in addition archaeological evidence of an Egyptian cultural connection. The Islands remained under Carthagian rule until they were included under Roman dominion in 218 BC, though the Punic culture was only very gradually modified by Graeco-Roman civilisation <sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> First published in: C. Savona-Ventura: *Outlines of Maltese Medical History*. MidSea Publ.: Malta 1997:p.7-17

<sup>&</sup>lt;sup>2</sup> T.C. Gouder: Phoenician Malta. *Heritage*, 1978, 1:173-186; T.C. Gouder: Some amulets from Phoenician Malta. *Heritage*, 1978, 1:311-315

Very little is known about the medical practices of the Phoenicians and Cartaginians, but it is recorded that one of the books of the Egyptian medical papyrus, the Ebers - written between 1550-1547 BC - was the work of an oculist from Bablos in Phoenicia. Though only partially deciphered, what we know of the book permits us to conjecture much more important knowledge than has been heretofore suspected in this Semitic race. The Phoenicians were part of the Canaanite world which was formed at the dawn of history by Semitic immigration into the territories between the Mediterranean and the Syrian desert. They, and likewise the Carthaginians, believed that the daily hazards of existence were caused by a multitude of malevolent spirits who permeated the universe and intervened in natural processes. These spirits were thus responsible for the onset of disease. They were imagined as hideous grimacing beings who could be exorcised by the magical powers of amulets or by incantations written on small strips of papyrus. Examples of these talismans have been excavated from various tombs in Malta and Gozo. Furthermore the Phoenicians are known to have had a number of sanctuaries dedicated to various deities in Malta<sup>3</sup>.

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<sup>&</sup>lt;sup>3</sup> J.H. Bass: Outlines of the History of Medicine and the medical profession. R.E. Krieger Publ., Huntington, 1971, p.29-30; L. Delporte: Phoenician Mythology. New Larousse Encyclopedia of Mythology. Hamlyn Publ, London, 1981, p.73-84

It is known that the supreme deity of the Phoenicians Baal - Melkart of the Carthaginians, Hercales of the Greeks, Beelzebul of the Bible - was a god of medicine whose priests were clad in red clothing. An inscribed stone, measuring 8x3x3" found near St. Dominic's Convent in Rabat dated to the 6th century BC, reads: "*stele of melk* (a technical term of sacrificial holocaust of a child) *to Baal set up by Nahun to the Lord Baal Hammon*". Baal Hammon was a dignified old man with a beard and his head was embellished with ram's horns. He was the skygod and god of fertility. Ptolemy mentions a temple in the SE of Malta dedicated to Melkart <sup>4</sup>.

Astarte, known also as Ashtar, Ishtar (to the Babylonians), Ashtoreth (to the Hebrews), Tanit (to the Carthaginians) is known to have had a sanctuary at Tas-Silg at Marsaxlokk in Malta. At Tas-Silg, where four distinct phases of occupation - Prehistoric, Phoenician-Punic, Roman and Byzantine - have been recognized, numerous dedications to the deity have been found inscribed on pieces of broken pottery, stone, ivory and bone. The Astarte sanctuary can be identified with the temple of Juno mentioned by Cicero and with the temple of Hera cited by Ptolemy. In origin, Astarte symbolized the goddess of fertility whose domain embraced all nature, vegetable and animal as well as human. Afterwards she became the goddess of love in its noblest

<sup>&</sup>lt;sup>4</sup> H. Lewis: Ancient Malta - A study of its antiquities. Colin Smythe Ltd, Bucks, 1977,

aspect as well as in its most degraded. The assimilation of this fertility deity by the Maltese was made easier by the previous concept of the Mother Goddess, the mysterious female "source of life", to whom the great Maltese Neolithic Age temples including the one at Tas-Silg were dedicated <sup>5</sup>.

Other fertility-related deities are known to have been venerated by the Punic Maltese. Talismans in the form of faience amulet figurines representing Bes and Toueris have been excavated from tombs in Malta and Gozo. Bes, an African deity by origin, was a popular god known also in Egypt and western Asia. He was a frightening dwarf with bow-legs and prominent belly. Because of his ugliness, he was believed to frighten away evil spirits. He presided over childbearing and was considered as a protector of expectant mothers. He was also a marriage-god and presided over the toilet of women. Toueris was another popular Egyptian goddess of childbirth and symbolised maternity and suckling. She was represented as a female hippopotamus with pendant mammae standing upright on her back legs and holding the hieroglyphic sign of protection <sup>6</sup>.

p.81; T.C. Gouder: 1978, 1:173-186, op. cit.; L. Delporte: ibid.

<sup>&</sup>lt;sup>5</sup> T.C. Gouder: op. cit.; E. Bradford: Mediterranean - Portrait of a Sea. Tutor Publ, Malta, 1989, p.155-162

The Punic Maltese were concerned not only with birth and fertility, but also with death. They believed in an afterlife as evidenced by the care given to their tombs and the talismans associated with death. A sixth century BC bronze amulet sheath containing a small rolled-up piece of papyrus bearing a Phoenician inscription with a representation to Isis was found in a tomb at Tal-Virtu, limits of Rabat. The sheath with a cover in the form of a falcon's head representing Horus - the Egyptian solar divinity - belongs to a distinct class manufactured in rigid imitation of Egyptian prototypes and widely diffused in Phoenicia and its colonies. The inscription has been translated to read "laugh at your enemy O valiant ones, scorn, assail and crush your adversary .....disdain (him), trample (him) on the waters; .....moreover prostate (him) .....on the sea, bind (him), hang (him)" These are the words of Isis - protectress of the dead - addressed to the deceased and which ensured her assistance for an unfailing victory over a mythical adversary barring the way to the afterlife. Faience amulets dated 7th-6th century BC of the Djed and Ouaz pillars have also been excavated from Bingemma near Rabat. The Djed was a simple fetish representing Osiris - god of the dead. Osiris gave his devotees the hope of an eternally happy life in another world

<sup>&</sup>lt;sup>6</sup> J. Viaud: Egyptian Mythology. *New Larousse Encyclopedia of Mythology*. Hamlyn Publ, London, 1981, p.9-48

ruled over by a just and good king. The Ouaz pillar derived from the form of the lotus flower was the symbol of rebirth <sup>7</sup>.

The preoccupation of the Punic Maltese with birth and death and the use of magico-religious conceptions to ward off evil spirits, the harbingers of disease, suggests that the inhabitants held a basic culture common to all Semitic races. Here every disease was a punishment from the gods. The inhabitants however maintained cultural connections with the Greek colonizers of southern Italy and Sicily evidenced by the presence of Hellenistic pottery and inscriptions found in association to Phoenician wares. This cultural association may have influenced the introduction of Greek medical thought and practice to the Islands, practices which played an important role well until the Middle Ages. The Hellenistic influence became more pronounced during the Roman dominion.

While little is known about the actual medical practice of the Punic Maltese further than their preoccupation with malevolent spirits, the community was well aware of the public health necessity of prohibiting burials within the city walls. These extra-mural burials gave rise to a number of necropolis in the periphery of the ancient

<sup>&</sup>lt;sup>7</sup> T.C. Gouder and B. Rocco: Un talismano bronzeo da Malta contenente un nastro di papiro con iscrizione fenicia. *Studi Magrebini*, VII Napoli, 1975, p.1-18; T.C. Gouder: 1978, 1:311-315, *op. cit.*; J. Viaud: *ibid* 

towns of the old capitals Mdina-Rabat in Malta and Victoria in Gozo. The tombs are rock-cut shaft inhumation graves with a sepulchral chamber hewn out of rock at the bottom of the shaft. The increasing preoccupation with the afterlife resulted in a change in burial practices. The inhabitants during the Bronze Age period cremated their dead, while the Phoenician period saw a preponderance of inhumations though remains of cremations in cinerary urns also exist side by side. Tomb furniture varied according to the period. It was simple in the early days but later on it became more abundant with numerous clay vases, glass bottles, ivory and metal objects being deposited with the dead for use in the afterlife <sup>8</sup>.

While at the beginning of the third century BC, the city of Carthage was the commercial capital of the Mediterranean, throughout the third century BC, through a process of slow political evolution and gradual military expansion, the Romans had made themselves masters of Italy. The Gauls to the north, the Greek cities to the south, the Etruscans, and the Samnite hill tribes had all yielded before the Roman sword and the Roman sense of patriotism. With the southern expansion of the Roman empire, it became inevitable that the two cultures should clash. The bone of contention in the Mediterranean was fertile Sicily. After a series of wars, Carthage was destroyed, and all the territory of

<sup>&</sup>lt;sup>8</sup> T. Zammit: The St. Paul's Catacombs and other rock-cut tombs in Malta. 7th ed.

Carthage was proclaimed a new Roman province under the name "Africa".

The first recorded contact of the Maltese Islands with the Roman southern expansion was during the First Punic War (probably in 255 BC) when the islands were attacked by the Roman fleet on its way back from a naval expedition in Africa. The Islands, however, subsequently were reincorporated in the political and military sphere of Carthage and they only came under Roman influence during the Second Punic War in 218 BC when Tiberius Sempronius Longus, one of the two Roman consuls for that year, crossed from Sicily to Malta in search of the Carthaginian fleet in order to secure his southern flank. The Island, which was at the time a Carthaginian possession, surrendered together with the city and a garrison of a little less than 2000 troops under the command of the Carthaginian general Hamilcar, son of Gisco. The Roman invasion initially had little cultural influence on the Islands, and for a couple of centuries the Punic substratum can be detected in the archaeological record as evidenced by the forms and production techniques of the ceramic repertoire, the survival of Punic religious cults and language. The earliest Latin inscription, one of a public nature, is dated to the beginning of the imperial period, a good two centuries after the Roman conquest. The Romanisation process

was a gradual one as a result of the political domination. The new culture, which eventually became Hellenistic, manifested itself in the introduction of new forms of ceramic assemblage, in architecture, and in interior decoration <sup>9</sup>.

While the Romanisation process of the Islands was a slow gradual one, the Roman occupation introduced the high standards of personal and domestic hygiene that prevailed throughout the Roman empire. Cleanliness depends upon an adequate water supply - a perpetual problem in the Maltese Islands. The preoccupation with the collection and storage of water of the local inhabitants is reflected by the presence of large cisterns associated with the majority of Roman estate remains on the Islands. An example of a typical large Roman cistern can be seen in association with a large country house at Ta' Kaccatura near Ghar Dalam. The cistern is cut into rock and is about 13 feet deep and its sides are about 33  $^{1}/_{2}$  feet square. It is roofed with slabs of rock supported by beams and there are 12 huge pillars made of stone blocks measuring about 2  $^{1}/_{2}$  feet square, the whole arrangement giving an effect of a cathedral. The Romans also made use of local springs to supplement rain-water collection. This is

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<sup>&</sup>lt;sup>9</sup> Naevius, Bell. Poen. iv, 37; supplemented by the fifth century AD writer Paulus Orosius iv, 8.5; Livy xxi, 51; A. Bonanno: Roman Malta: The Archaeological heritage of the Maltese Islands. World Confed Salesian, Rome, 1992, p.13-17

exemplified by the country house and baths at Ghajn Tuffieha. Here the building is in close proximity to a natural spring which at the time of excavations supplied about 80000 gallons of water daily to the main water-lines of Malta <sup>10</sup>.

Remains of private and public baths or thermae have been excavated from various localities in Malta. These were built of marble with richly decorated pavements of mosaic and were fed by a constant supply of water which was conveyed through underground lead pipes from nearby springs or cisterns. Some of the houses, such as the "Roman Villa" at Rabat (Malta) and the "villas" at Ghajn Tuffieha (Malta) and Ramla Bay (Gozo), were also supplied with hot water in winter from a caldarium placed some distance from the house, while an underground furnace or hypocaustum furnished hot air. It appears that the local baths were arranged similarly to those described abroad. The bathing habits of the Romans was to move first into a tepidarium for a warm air bath, then to the caldarium the hot air room where after profuse perspiration the bather took a warm bath. This was followed by a cold dip in the cold room or figidarium. The apodyteria were the dressing rooms <sup>11</sup>.

<sup>&</sup>lt;sup>10</sup> H. Lewis: *op. cit.*, p.83-94

<sup>&</sup>lt;sup>11</sup> A.A. Caruana: Report on the Phoenician and Roman Antiquities in the Group of the Islands of Malta, 1882, Malta, p.62; T. Zammit: The Roman Villa Museum at Rabat.

Among the ruins of the Roman thermae of Ghajn Tuffieha there is a room containing a number of privies. This room was ten feet square and along three of its walls was ranged a sort of stone bench, one foot high, made of vertical and horizontal slabs. The upper surface of the bench had nine circular holes cut in it a distance of about two feet from one another to serve as closet seats. Each seat had a small rectangular notch cut in its thickness in front. The stone slabs containing the seat were moveable, an arrangement that readily permitted inspection and cleaning of the underlying space and the introduction of dry earth to cover the excreta <sup>12</sup>.

The Romans maintained the Punic regulations regarding the prohibition of burials within the city walls; the much more hygienic method of cremation which was common elsewhere on the Continent, did not on the Islands replace the Punic practice of inhumation. This practice received further impetus with the introduction of the concept of physical resurrection which accompanied Christianity. The old Punic tomb developed into a neo-Punic one circa 150 BC which featured a deep shaft. They later expanded their tombs giving rise to a

Archivum Melitense, 1918, iii:241; Report on the work of the Museum Department for 1931-32, Government Press, Malta, 1933, p.5

 $<sup>^{12}</sup>$  T. Zammit: Roman Villa and Thermae at Ghajn Tuffieha, Malta. Bulletin of the Museum, Malta, 1931, i:62

number of hypogea situated outside the city. These hypogea or catacombs are especially equipped to perform a funeral rite including a libation of the dead. Burial corporations of several trades, including physicians, have been recorded. With the introduction of Christianity, some of these catacombs were acquired by the Church during the 2nd-3rd century and subsequently developed into large complexes <sup>13</sup>.

The Punic cultural influence continued well into the Roman era. The sanctuaries and their important place in the religious life of both the Romans and the natives served to bring them together. The Romans accepted Astarte as their own while the neo-Punic natives welcomed the Roman Gods identifying these with their own. This is also reflected by the magico-medical practices which were evident in the Islands during this period. The Egyptianizing cult is evidence by a beautiful marble statuette Bes now in the possession of a private collector dated to about the second century AD. There may also have been veneration towards the cult of Isis <sup>14</sup>.

Items from a tomb of the early Roman period circa 150 BC include late Punic type feeding bottles where a piece of cloth wrapped round the small nozzle jutting out of the shoulder served as a teat. This

<sup>&</sup>lt;sup>13</sup> T. Zammit: op. cit.; H. Lewis: op. cit., p.114-165; V.J. Camilleri: Saint Agata: An Archaeological Study. MSSP, Malta, 1984, +133p.

A. Bonanno: op. cit., p.30.

pottery item may have served to feed infants and invalids. A specimen has been found accompanying a child's skeleton aged about five years. A earthenware vessel resembling a present day male urinal has also been excavated. These two items suggest that nursing concepts were prevalent of the Islands, though this was family based <sup>15</sup>.

The medical outlook of the Romans in the early centuries of the Republic was a practical one consisting solely of 'folk' traditions. The early Roman chose to threat himself and his family rather than develop a theoretical medicine as had the Greeks. Early Roman medicine should be described as popular or quasi-religious, rather than irrational. The Hellenistic influence which started in the third century BC slowly changed these attitudes with the emergence of the professional physician. Hellenistic medical thought gave a cohesion which native Roman medicine lacked. The presence of an organized medical profession in the Islands is suggested by a tombslab found in a catacomb in the front part of St. Paul's Catacombs at Rabat dated to the second century AD <sup>16</sup>.

This slab contained fourteen diagrams depicting medical instruments arranged in what appears to be a stylized representation of an open

A.A. Caruana: Ancient pottery from Ancient Pagan Tombs and Christian Cemeteries in the Islands of Malta, Malta, 1899, p.29, 33, fig.23

<sup>&</sup>lt;sup>16</sup> J. Scarborough: Roman Medicine. Thames & Hudson, London, 1969, p.15-37

instrument case similar to that depicted in a late Hellenistic relief from Ostia which illustrates the Roman philosopher-physician sitting in his study. The tomb relief from Malta included the representations of two surgical shears or scissors whose shape is similar to those depicted in the "Nymphs punishing a satyr" mosaic emblem excavated at the "Roman Villa" at Rabat. Here the shears are being used to cut the beard of the bound male. Surgical shears were generally made of steel or bronze and may have been used for cutting hair as a therapeutic measure or for cutting tissue. The representations are similar to those shown in the relief from Ostia, Italy. The slab from Malta also depicts two medicament boxes - the first with three compartments, the other with one. These boxes were probably used for carrying unguents or powders for medicinal use. Depicted also are two whetstones for sharpening knives possibly used also as ointment slabs, two hinged surgical tongs or forceps (similar to those excavated from Pompeii, Italy), two bleeding cups or cupping vessels (similar in shape to those depicted on a sarcophagus relief from Ravenna, Italy), a vaginal speculum with a screw mechanism for opening, a chisel with handle and flat blade for chopping bones (similar to those depicted in the relief from Ostia), an etui or portable probe case, and what may be a bleeding bowl. The presence of these sophisticated medical

implements used in surgery suggest a highly organized and advanced profession <sup>17</sup>.

Medical disorders prevalent on the Islands during the period can be identified from the scanty pathological material and written sources. Skeletal remains found in the various tombs of this period on the Islands furnish us with a number of pathological material. Life without injury can hardly be imagined. Traumatic lesions are exemplified by two skulls discovered in separate localities which showed evidence of a healed lesion involving nearly the entire thickness of the frontal bone but sparing the internal surface. The lesion formed a shallow conical depression the greatest diameter of which was about half an inch. These fractures were the result of a severe cranial injury which however was not lethal. The similarity and shape of the lesions suggest that these may have been a product of aggression with a blunt weapon. Two lumbar vertebrae found in another Roman grave showed marked lipping round the upper and lower margins of their bodies. This "lipping" is a feature typical of chronic osteo-arthritis. Osteo-arthritis is perhaps the best documented disease in palaeopathology. It has been described in Palaeolithic man, while many of the lesions found in ancient Egyptians were typical of

<sup>&</sup>lt;sup>17</sup> J. Scarborough, *ibid*, pl.12,35,36,40,47; P. Cassar: Surgical Instruments on a tomb slab in Roman Malta. *Medical History*, 1974, 18:89-93

the disorder. In a general way it can be ascribed to the inevitable trauma to the various joints which accumulates over the course of many years. Chronic strain, particularly compression of the backbone from humping heavy loads, contributes to the onset of the disorder, though the overall shrinkage and loss of elasticity in the intervertebral discs as age advances is also connected with it in some way. The involvement of the lumbar segments is predisposed to by the perpendicular thrust of the body weight being directed downwards through the spinal column, the combined mass of the head, arms and trunk accounting for three-quarters of the total bodyweight. In addition, an agricultural occupation may have increased the pivotal trauma in the lower spinal segments. Another specimen showed a nonpathological anatomical variation of the sacrum. Here the transverse process of the first sacral vertebra was not fused with the rest of the bone. In the normal sacrum, the transverse process of the first sacral vertebra is usually made up of a sloping mass of bone projecting from the lateral side of the body of the vertebra. Morphologically it consists of the vertebral transverse process and the costal element fused to each other and to the rest of the vertebra. Failure of fusion may occur during development leaving no adverse effects on function <sup>18</sup>.

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<sup>&</sup>lt;sup>18</sup> P. Cassar: *Medical History of Malta*, Wellcome Hist Med Libr, London, 1964, p.8-9; C. Wells: *Bones, bodies and disease*. Thames & Hudson, London, 1964, p.36-130

The Roman period furnishes us with the first written document relating to medical disease on the Islands. This document reveals the superstitions prevalent on the Islands besides recording one specific disease then prevalent. Paul of Tarsus was shipwrecked on the Island along with the evangelist Luke. Luke, the physician, was very much preoccupied with medical disease so much so that of all the miracles described by Luke in his gospel, only three are not of a medical nature. He also positively states that "He called the twelve together and gave them power and authority over all devils, and to cure disease". Thus the miraculous and divine healing power was transferred to the followers of Christ. During his stay in Malta, Luke records a number of miracles of a medical nature performed by Paul. He states that many sick people in the Island came to Paul and were cured. He also recounts two specific medical disorders. On arrival, Paul was bitten by a snake. The natives reaction to this event showed marked superstition initially believing Paul to be a murderer being punished by the gods. When nothing happened they decided that Paul was a god. Snake bite was expected to be followed by swelling or sudden death - symptoms of viper poisoning. The interpretations of this extract in the light of the fact that the present resident snake species are not poisonous have been various and have given rise to a number of pseudo-historic and medical beliefs <sup>19</sup>.

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<sup>&</sup>lt;sup>19</sup> Luke: Acts of the Apostles, 28:1-10; C. Savona-Ventura: Maltese Medical Folklore

The second specific disease recorded by the evangelist was dysentery with fever. This cosmopolitan infectious disease of the intestinal tract is common in warm moist climates and reference to it has been made by a number of Greek and Roman writers. It may be symptom-less in many individuals but may present with a blood stained diarrhoea with a mild fever. The Acts record that the Island governor's father was ill with fever and bloodstained stools. He was miraculously cured by Paul. Infections were a common problem in early communities contributing to an early mortality of the population. The infant mortality during the Roman period must have been very high. This is evident by the large number of graves belonging to infants which can be found in the various catacombs. At St. Agatha Catacomb complex at Rabat (dated 3rd century AD) about one-fourth of the internments were infants. One family tomb containing two adults also contained the bones of an unborn child <sup>20</sup>.

The end of the Roman era was heralded by the division of the Roman empire into two parts, the western one on the decline from the beginning of the fourth century till its final collapse with the death of the last emperor Romulus Augustulus in AD 476, and the eastern one

<sup>-</sup> Man and the Herpetofauna in Malta: A Review. *Maltese Medical Journal*, 1990, 2(1):41-43

Luke: Acts, ibid; V.J. Camilleri, op. cit.

centred on Byzantium which was turned into a new capital by Constantine in AD 330. The Islands found themselves under the jurisdiction of the Byzantine empire around AD 535 when Sicily was conquered by Belisarius, the general of Emperor Justinian. Before that date it is possible that the Islands were taken over by the Vandals and Ostrogoths. The 400 years of Byzantine influence or domination over Malta are completely shrouded in mystery, though it appears that at least by 592 AD Christianity on the Islands had become established with the presence of a Bishop of Malta<sup>21</sup>. Christianity was associated with the cult of Christ the Healer, and under the Byzantine emperors the practice of medicine passed into the hands of the Church, and priest and doctor became the same. The approach of the Byzantine 'doctor' was that disease was a punishment resulting from sin, a concept that persisted into medieval times. A number of saints were invoked against special disease. Christian treatment of disease borrowed largely from Graeco-Roman practice, while the sacrificial offering to the demigod became the votive offering to the saint <sup>22</sup>. The archaeological record for this period of Maltese history fails to illuminate medical practices on the Islands. It unfolds again just before the end of this period at Rabat in the form of a marble tombstone with a Greek inscription which reads "Here lies

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<sup>&</sup>lt;sup>21</sup> A. Vella: *Storia ta' Malta*. KKM, Malta, 1974, vol.1,p.55-62

<sup>&</sup>lt;sup>22</sup> F.F. Cartwright and M.D. Biddiss: *Disease and History*. Rupert Hart-Davis, London, 1972, p.5-28

Domesticus, Christian and doctor. He lived for 73 years and died in this place a day before the Kalends of February in the year 810" <sup>23</sup>.

The seventh century saw the rise of a new Mediterranean power which originated in Arabia. By the eight century all of North Africa and part of western Europe was in Arab hands. The invasion of Sicily started in 827 AD, but conquest was not achieved until 878. The conquest of Malta by the Arabs occurred around the year 870 AD. The Arab domination of the Islands heralded the onset of the Medieval period.

<sup>&</sup>lt;sup>23</sup> A.A. Caruana: *op. cit.*, p.156