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Carpentry in Ptolemaic Egypt

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Abstract

The art of wood carving and the crafts of the carpenter are of very ancient date in Egypt. Carpentry was an essential craft and played a vital role in the Ptolemaic Society through manufacturing furniture and different shapes of wood work. This paper aims to highlight the craft of carpentry in Ptolemaic Egypt. The aim of this study will be achieved by detecting Greek papyri which date to the Ptolemaic period and displaying the few representations of carpentry scenes depicted on the walls of the Tomb of Petosiris at Tuna El-Gable. This study will also specify types of wood used. It also shed light on the role of carpenters, their workshops, their tools, and their products. This study is depending on a historical and analytical methodology to achieve its aims.

Types of Wood Used in Manufacturing:

In antiquity, Egypt possessed a variety of trees capable of providing timber, and still does. Though trees are often depicted on the walls of the tombs and temples, they are usually drawn in such a conventional way that only very few can be identified with certainty. The main types that flourished in Pharaonic times in Egypt were acacia, sycamore-fig and tamarisk of which the wood was used in carpentry and joinery. However, sometimes the wood of other trees was also used, particularly that of the date palm, the Dum-palm, the Sidder, the Persea and the Willow[1].

Acacia also was one of the woods that were extant in Egypt, and Herodotus mentioned that it was used not only for boat building but also for masts[2]. This was emphasized by another Greek writer, the botanist Theophrastus, who stated that acacia was used for roofing and for the ribs of ships[3]. It seems that the acacia tree was found in abundance in Thebes[4].

There were also the Carob trees that Theophrastus mentioned that it grew in Egypt, pointing out that they were found in Syria, Ionia, Kindos and Rhodes[5].Pliny also referred to this[6], and Strabo mentioned that the Carob tree grew abundantly in Ethiopia[7].

One of the Egyptian woods used in carpentry was also the Persea that Theophrastus described as an Egyptian tree growing abundantly in the territory of Thebes. He mentioned that it was evergreen with strong black wood used in the manufacture of beds, chairs, pictures and other things[8]. It had edible fruits useful for the stomach[9]. It seems that there was confusion between Persea and Peaches[10].

The Date palm had been cultivated in Egypt since very early times and was often depicted on the walls of rock-cut tombs dating from Thebes from the time of the

Eighteenth Dynasty. The trunks of this tree were used in roofing. During the Greco-Roman Period, it was employed in the houses of the village of Karanis at Fayum mainly for roofing[11].

The wood of Dum palm was also used in carpentry. It is marked with its hardwoods compared to date palms. Theophrastus describes the wood as being very compact and hard. He mentioned also that it was often used by Persians to make bed legs[12]. Delile stated that this wood used by the Egyptians since the Beginning of the 19th Century for making doors and was employed by the ancient carpenters and joiners for similar purposes[13].

The wood of the Persea tree which is mentioned by a number of the classical writers in Egypt was used occasionally. A Sidder species (*Christ thorn tree*) known as the nabk in Egypt provided small pieces of timber that could be used to make dowels, sticks, mummy-labels, and other small items[14]. The willow tree was used also for a variety of purposes: boxes, chariot-poles, mummy labels, etc.[15]. It was used for making tent poles as mentioned in Greek papyrus dating from 243 BC[16].

The Egyptians also used sycamore wood, which Diodorus referred to as the Egyptian fig tree[17]. The same was mentioned by Pliny[18]. Theophrastus mentioned that its wood had many uses. It was used for making coffins and statues[19]. Strabo also stated that the sycamore wood had grown in Ethiopia[20]. Its wood was used for different purposes including the making of statues, bases for columns, sarcophagi, coffins, and boxes[21]. The tree remains a characteristic feature of Egyptian countryside. There is a document dating back to the year 251 BC showing the use of sycamore wood in the construction of boats[22].

The use of Tamarisk wood is attested since the Predynastic period to as late as Greco-Roman Period. Herodotus mentioned that some rafts of Tamarisk were used in boat building[23]. Specimens of wood of two Tamarisk species were found in Karanis at Fayum dating back to the Greco-Roman period[24].

Although indigenous trees mentioned above were exploited for a wide variety of purposes, Egypt has long lacked the large trees that grow naturally. The need was not simply for timber, but for timber of larger size and better quality than was produced locally[25]. Therefore, it was necessary to import a large part of the necessary timber. The importation of foreign wood is attested as early as the First Dynasty. Palermo Stone recorded that forty ships loaded with wood was brought to Egypt during the reign of King Seneferu[26].

Egypt had imported many types of timber from abroad, including Oak[27], Beech[28], Boxwood[29], Cedar[30], Cypress[31], Elm[32], Juniper[33] and Pine[34]. Most of these woods were undoubtedly brought from Western Asia and mainly from Syria (the cedar from the Lebanon) and the southern coast of Asia Minor, but the Box, Beech and Lime, the objects of which were only quite small (mummy labels) and of very late date (3rd to 4th century AD) may have obtained from Southern Europe. Ebony had been one of the most important types of wood used in carpentry, and was brought from Ethiopia[35]. Pliny stated that the Ebony tree did not grow in Egypt[36], and one of its best types was that brought from Ethiopia[37]. The Cedar wood was used during the Ptolemaic Period for

making sarcophagi, coffins and other appurtenances of burial[38], while beech and box were employed for making mummy labels[39]. Also the fir trees were used in carpentry. A document dated to 256 BC refers to the cultivation of 300 fir trees in Egypt[40]. Juniper and Lime were used in the Roman Period for making mummy labels[41]. Among the imported woods used in carpentry were Oaks that were grown in the territory of Thebes according to Theophrastus' statement[42]. It was used for the pole, axle and spokes of the 18th dynasty Egyptian chariot in the Florence Museum[43].

Ptolemaic interest in the cultivation of trees and production of wood:

The Ptolemies realized the importance of wood, and the extent of the shortage of good woods experienced by Egypt. The famous papyri of Tebtunis showed how the Ptolemies preserved timbers, organized the planting of trees at the right times, and the necessity of planting their sprouts in nurseries to receive the necessary care to be transported in a timely manner when they grow to bridges. They were guarded committed workers so as not to be damaged or cut[44]. The trees mentioned in the papyri also included the willow trees, acacia and the cranberry tree. The Papyrus states *"Take care also that of the local trees the planting of the mature ones be done at the right season, namely for willows and mulberry-trees, and that of acacia-trees and tamarisk"*[45].

There are many papyri showing the extent of Apollonius' interest in trees, fetching, planting and caring for them. This may be attributed to the scarcity of trees in Arsinoe, so the needs of the Apollonius estate came from elsewhere. This is mentioned in a letter from Apollonius to Panakestor[46] in which Apollonius informs Panakestor that he is not able to send him any wood and instructs him to buy up as much as he requires, not only in the Fayum but in the neighboring names as well[47]. The wood may have been required for house-building.

Many papyri of Zenon's correspondences showed transferring little sprouts from the olive, laurel shoots, fig, palm, pear, walnut and pomegranate trees from the gardens of the King and from Memphis to be planted in the park at Philadelphia. This was mentioned in a letter from Apollonius to Zenon[48]. There is a papyrus dating back to 256 BC[49], a letter from Apollonius to Zenon ordering him to send to Alexandria a cargo of dry timber, as many and as thick as possible to be used at the festival of Isis. It did not explain what kind of use, but it was clear that it was for cooking.

Another papyrus dating back to 255 BC[50] , which is a daily expense account, reported the timber account for the manufacture of vehicles and tools of agriculture.

Another papyrus dating back to 255 BC, a letter from a person named Diotimos to Zenon, informing him of the work done to build a house of Zenon and asking him to give orders to send the necessary amount of wood so as not to disrupt the work[51].

There is also papyrus dating back to 251 BC[52], which is a letter from a person called Spondates -who was in charge of the construction of some ships in the year 35- to Zenon complains that the work is not progressing because he has no sycamore wood and asking him to send the sycamore wood needed to make boats at the request of the boat-maker Palouse.

In addition, another papyrus explained the interest of Zenon in planting trees in Philadelphia. In this document Apollonius orders Zenon to plant Fir-trees all over the park and round the vineyard and the olive-groves, in the number of at least three hundred. For the tree has a striking appearance and will be of service to the king. That is to say, it would provide timber for ship-building besides being an ornament to the estate[53]. Theophrastus told us about the process of planting shrubs in the nurseries[54] and then referred to their transfer after some time to another soil, which Pliny also confirmed[55].

According to the previously mentioned documents, the researcher can conclude that the Ptolemies give special interest for cultivating different kinds of trees in order to fulfill the state's needs of wood. They used different kinds of timber in various purposes like roofing houses and making furniture in addition to using them in cooking.

The government did not give the inhabitants their heads to misuse Egypt's wealth of trees. It was forbidden to cut trees without the permission of the Oikonomos[56]. The government managed to impose sanctions on those who trespass or destroy trees. This is evidenced by the fact that Ptolemy VIII's (Euergetes) amnesty decree included an amnesty for those who cut down wood[57]. The role of trees in building a strong fleet that was much needed by the Ptolemies to face the ongoing series of wars between them and the Seleucids is undeniable. Rostovtzeff[58] told us about a papyrus dating to 251/250 BC concerning an order from Philadelphia (285-224 BC) to Apollonius to cut a large amount of wood for processing war ships in the wake of his defeat in the second Syrian war.

Another relevant papyrus showed that Apollonius ordered one of his agents, Demetrius, to collect the workers to cut 500 trunks of local trees, including acacia and willow to make war supplies such as warships[59]. Hence, the researcher can conclude that the Ptolemaic state established strict laws and restrictions on cutting or damaging trees, in addition to their essential need for trees to form a strong fleet.

Carpentry Craftsmen

The art of wood carving and the craft of carpentry could not have been known in Egypt before the late Predynastic period as the metal (copper) tools had only existed since that time. In addition, the few pieces of wood dating of earlier date must have been formed in very primitive ways. This may have been the only method in the absence of metal tools[60].

Since Egypt imported wood regularly from an early date, it was said that the art of carpentry could not have originated in Egypt, but must have been brought to it from abroad. This is not necessarily true, as there were always in Egypt, as the case today, a relatively large number of small indigenous trees such as buckthorn, sycamore fig, acacia, Sidder, tamarisk and willow that could have been used to make boats, boxes, caskets, coffins, furniture, and other objects. If there is no prior knowledge of the art of carpentry, it would be difficult to understand the foreign demand on wood. This shows the need to timber of better of quality, larger sizes and preferably in the quality of local wood[61].

Carpenter (τέκτων)

There are many documents which deals with work of the carpenters[62]. They practiced their craft by contracting with the employer. There is a papyrus dating back to the third century BC[63] between "Betis ben Pelaius" a carpenter and "Nicotis, the son of Agatrius", of Persian origin. The text states:

"On the fifth of Bermuda, of the sixth year, in the presence of Bath iris and Ammonius the scribe, both Betis ben Pelaius the carpenter of Nicotis, son of Agatrius, agreed to make the yoke of a carriage and a basket, at best. The parties agreed that if the agreement was not activated till the seventh of the said date, the first party is obliged to pay a fine".

It is clear to us from the document that the carpenter was working on a contract with the employer. It seems that the presence of Amonius the scribe here is to guarantee the rights of both parties and in the case of default in terms of both the quality of the product or the agreed period, there will be a fine.

Carpenters often get their fees or part of it in advance and it seems that it was a down payment[64]. There is a papyrus dating back to 257 BC[65], which is a letter from a person named "Amyntas"[66] to Zenon, informing him of what a carpenter called Kallianax received in advance wine and money in exchange for making couches for Apollonius. He added that the carpenter escaped and that he was informing Apollonius in order to punish him for what he did. The employer had to pay all the costs of the carpentry materials used to make the works agreed upon[67]. In some cases, the work was collective and included more than one carpenter. Some papyri mentioned the carpenters[68]. It can be said that some works required the work of more than one carpenter at the same time, and this was often associated with construction, especially in the large estates[69]. The reason for this is that the carpentry is considered to be a part and parcel of the construction craft as it is a part of every built house and the expenses of its costs were always calculated.

As for the carpenters' wages, the papyrus did not give fixed and specific wages for these carpenters, perhaps because it was not possible to determine the amount of wood used in the manufacture of each door or window due to lack of information, or the price of wood or the type from which these doors and windows were made, as well as the time it took for each product, or the price of other materials used in the manufacture[70].

Workplaces

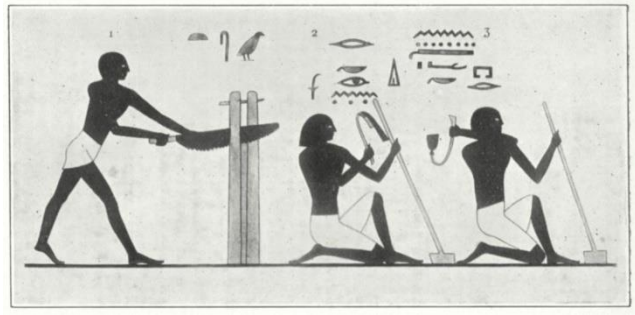
Carpenters performed their works in a carpentry workshop which was called as ἐργαστήριον in papyri[71]. A papyri dating back to 31 BC[72] showed an agreement on a loan in which the creditor stipulated if the debtor fails to repay, he will be entitled to confiscate the properties of the guarantors, including a carpentry workshop belonging to a guarantor called Lykarion.

Here, a fact should be noted that is proved by papyri, many carpenters managed to practice their work at home[73]. It seems that this is due to the agreement between both the employer and carpenter. It is mentioned earlier that carpentry is a complementary craft of construction as it must be at home to determine the sizes of doors, windows and the like of various carpentry works.

Tools used in carpentry:

The tools employed in carpentry were well known in ancient Egypt and continued till the Greco-Roman period. They were depicted on the walls of the tombs, others specimens of them were found in tombs either full size or miniature. The tools used in carpentry included adzes, hammers, axes, chisels, saws, arc or bow drills and wooden mallets (pl. 1, 2). All of these tools accept some of the chisels having wooden handles. Blades were initially made of copper that was replaced later with bronze[74].

Pl. 1. Carpenters' Tools (in the British Museum), after, Lucas, 1934, p.218
Figs.1.2. 3, 4. Chisels and drills, 5. Part of drill, 6. Nut of wood belonging to drill, 7. 8. Saws, 9. Horn of oil, 10. Mallet, 11. Bag for nails, 12. Basket which held them



Pl.1. Carpenters using saw and adze. After, Lucas, 1934, p.216

The saw was of a particular interest, according to Petrie[75], using saw dates back to the era of the first Dynasty as a wooden coffin showing signs of rough sawing was found and dated back to that era. The saws were of two types, the push saw and the pull saw. The first one which is the western type having the cutting edge of the teeth is set away from the handle. It cuts the wood by pushing its blade forward. The second one having the cutting edge teeth set toward or close to the handle and it is used by pulling its blade[76]. According to Miss Lane[77], the one used in ancient Egypt is the pull saw.

Carpenters' Products

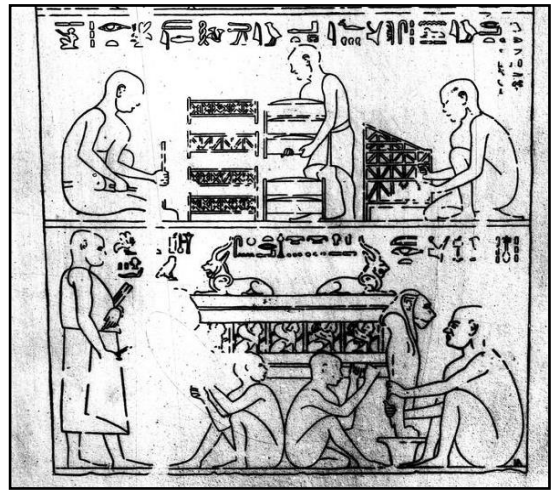
Carpenters' products were numerous. Many of their products were mentioned in an account of woodwork for a new house, probably built for a man called Diotimos[78]. They included windows[79], window with bars and paneled sides[80] and double-leaf windows[81]. As for the doors, they included interior and exterior doors, backyard doors, stair doors[82], compartments doors[83], side-rooms doors[84] and door frames[85]. their products also

included carts[86], moneyboxes[87], boxes[88], caskets[89], dish or tray[90], baskets[91], cooking large bowl[92,] chair[93], double-seat chair[94], sofa[95], triple seat sofa[96], table[97], footstool[98], courses[99], swing beams[100], wagon shafts[101] and beds[102].

Scenes of carpentry in the tomb of Petosiris at Tuna El Gable:

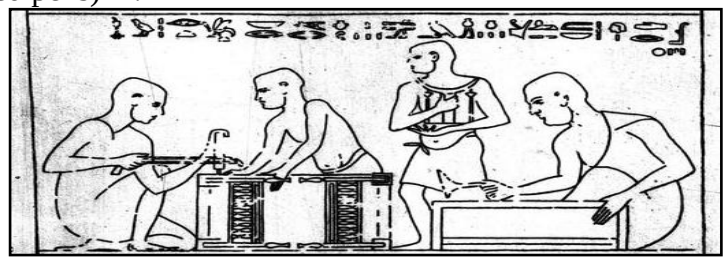
The walls of the pronaos of the tomb of Petosiris at Tuna El Gable are decorated with daily life scenes and scenes of different crafts. Among these scenes are the scenes of the carpenters engaged in manufacturing different woodwork. They are making furniture with all the tools (augers, clamps, chisels, and scrapers) and the techniques used on these materials, that is, for perforations and incrusting of metals (gold and silver). They "perform work that is useful for their master" as stated in one accompanying inscription[103].

These scenes are depicted on the north wall of the pronaos. The first scene is depicting a group of carpenters in two registers, in the upper register they are making a group of boxes, frames and pieces of furniture, while in the lower register there are three carpenters put the finishing touches on a lion-headed and footed funerary bed[104]. (pl. 3)



Pl. 3. Carpenters performing their duties, Tomb of Petosiris, Pronaos, north wall, east end part, second and third register. After, Lefebvre, 1923 b, pl. XI.

The second scene, to the left side a carpenter is represented dealing with a part of a wooden pierced panel with a bow drill while his assistant steadies the piece; to the right side a carpenter holds an adze for smoothing the top of a small chest[105]. (Pl. 4). In both scenes mentioned above, the scribes supervising the activities can be found and are usually also easy to identify through their long robes or typical professional equipment (palettes and reed pens)[106].



Pl.4. Carpenters making furniture, Tomb of Petosiris, Pronaos, north wall, left part, third register. After, Lefebvre, 1923b: Pl. X.

Conclusion

In Ptolemaic Egypt there were several crafts; one of the essential crafts was the carpentry. The art of wood carving and the crafts of the carpentry are of very ancient date in Egypt. The carpenters played important role in producing manufacturing furniture and different shapes of wood work.

Although carpenters depended on local types of wood like Persea, Date palm, the Dum-palm, Sycamore, Sidder, Willow, they needed timber of larger size and better quality than was produced locally so they imported a large part of the necessary timber like Cedar, Oak, Beech, Boxwood, Cypress and Pine.

Results of analyzing papyri revealed that the Ptolemies preserved timbers, organized the cultivating of trees, and the necessity of planting shrubs in the nurseries. They were guarded committed workers so as not to be damaged or cut. The government managed to impose sanctions on those who trespass or destroy trees. This interest was attested in the papyri of Zenon and especially in the estates of Apollonius.

The documents also revealed that the Ptolemies give a special interest for cultivating different kinds of trees in order to fulfill the state's needs of wood. They used these different kinds of timber in various purposes like roofing houses and making furniture in addition to using them in constructing boats. It is worth mentioning that in the Pharaonic period the same types of local were used, they also depended on imported wood of best quality. They excelled in wood working especially wooden coffins in addition to other wooden objects.

The craft of the carpenters was attested in several documents which date to the Ptolemaic period. Documents indicate that they practiced their craft by contracting with the employer. They often get their fees or part of it in advance and it seems that it was a down payment. The employer had to pay all the costs of the carpentry materials used to make the works agreed upon .In some cases, the work was collective and included more than one carpenter. The documents did not give fixed and specific wages for these carpenters.

Carpenters performed their works in carpentry workshops. Sometimes carpenters managed to practice their work at home. They sued different tools like saws, hammers, adzes and chisels. These tools were made of cooper and having wooden handles. They were well known in ancient Egypt and continued till the Greco-Roman period.

Carpenters' products were numerous. They included pieces of furniture like window, doors, frames, carts, tables, chairs, beds. They also produced wagons, carts and items of daily use like baskets, boxes, trays and cooking large bowl. Funerary furniture also was among the products. In addition they constructed boats. These products were mentioned in documents.

Carpentry craft was depicted on few representations on the walls of Petosiris' tomb at Tuna El Gable. The scenes revealed a group of carpenters performing their duties in in groups under supervision of scribes. The scenes show them using tools like chisels and saws. They produce frames, baskets and funerary beds.

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Note: For abbreviations and citation of papyri and inscriptions, the researcher follows to the *Checklist of Editions of Greek, Latin, Demotic and Coptic Papyri, Ostraca and Tablets*, which is available at: http://scriptorium.lib.duke.edu/papyrus/texts/clist.html

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[45] *P.Tebt.* III.1.703, LL. 191-7 (Arsinoe, 210 BC),
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[68] *P.Count* 6 (=*SB* XII.10860) (Ghoran, 232 BC); *P.Count* 50 R (1st \2nd century BC); *P.Count* 49 R (2nd century BC); *BGU* XVI.2607 (Herakleopolites, 15 BC).
[69] *P.Cair.Zen.* IV.59763 (Philadelphia, III BC).
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[71] This term was mentioned in a large number of documents, which is a general designation meaning the place of work, storehouse or workshop, these documents are:
BGU IV.1117 (Alexandria, 13 BC); *BGU* X.2011 (250-200 BC); *P.Amh*. II.59 (Soknopaiou Nesos, 151/140 BC); *P.Athen*. 59 (Arsinoite, 3rd Century BC); *P.Cair.Zen*. II.59199 (Philadelphia, 254 BC); *P.Cair.Zen.* III.59403 (Philadelphia, 3rd Century BC); *P.Col.* III.34 (Philadelphia, 254 BC); *P.Col.* III.52 (Philadelphia, 251 BC); *P.Coll.Youtie* I.16 (109 BC); *P.Erasm.* I.2 (Oxyrhyncha 152 BC); *P.Erasm.* I.12 (Kaine, Arsinoites, 152 BC); *P.Erasm.* I.13 (Kaine, Arsinoites, 152 BC); *P.Erasm.* II.36 (Arsinoite, 152 BC); *P.Erasm.* II.38 (Arsinoite, 152 BC); *P.Erasm.* II.39 (Arsinoite, 152 BC); *P.Erasm.* II.40 (Arsinoite, 152 BC); *P.Erasm.* II.41 (Arsinoite 152 BC); *P.Erasm.* II.43 (Arsinoite, 151 BC); *P.Erasm.* II.44 (Arsinoite, 151 BC); *P.Erasm.* II.46 (Arsinoite, 151 BC); *P.Erasm.* II.47 (Arsinoite, 2nd century BC); *P.Erasm.* II.50 (Arsinoite, 149 BC); *SB* XIV.11962 (Arsinoite, 149 BC); *P.Erasm.* II.54 (Arsinoite, 149/148 BC); *P.Hamb.* IV.235 (261/60 or 232/222 BC); *P.Heid.* VI.370 (Philopator Apiados, Arsinoites, 179/168 BC); *P.Lille* I.21 (Ptolemais Hormou, Arsinoites, 155-144 BC); *P.Lond.* VII.1976 (Philadelphia, 253 BC); *P.Mich.* I.36 (Philadelphia, 254 BC); *P.Petr.* III.35a (Gurob, Arsinoites, 3rd century BC); *P.Petr.* II.48 = *P.Petr.* III.116 = *P.Lond.* II 588 descr (Gurob, 187 BC); *P.Ross.Georg.* III.2 (3rd century BC); *P.Tebt.* III.1. 825 a (Tebtynis, 176 BC); *SB* XIV.11867 (Ptolemais Hormo, 1st century BC).
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[82] *P.Mich.* I.38 (Philadelphia, 254 BC).
[83] *P.Mich.* I.38 (Philadelphia, 254 BC).
[84] *P.Mich.* I.38 (Philadelphia, 254 BC).
[85] *P.Mich.* I.38 (Philadelphia, 254 BC).
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حرفة النجارة في مصر البطلمية

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معلومات المقالة

الكلمات المفتاحية

النجارة، النجارون؛ بردي؛ بطلمي؛ زينون؛ خشب؛ أدوات؛ مقرة بيتوزيرس.

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الملخص

تعتبر حرفة النجارة من أقدم الحرف التي نشأت في مصر القديمة حيث يرجع تاريخها إلى بداية عصر الأسرات. وقد برزت في مصر البطلمية العديد من المهن والحرف الصناعية من ضمنها حرفة النجارة، حيث لعب النجارون دورا مهما في صناعة أعمال الخشب والأثاث والمنتجات الخشبية المختلفة. لذا يهدف هذا البحث إلى إلقاء الضوء على حرفة النجارة في مصر إبان العصر البطلمي وذلك من خلال الاعتماد على تحليل مجموعة من الوثائق البردية والاوستراكا التي ترجع لذلك العصر بالإضافة إلى دراسة الحرفة فنيا من خلال عرض للمناظر القليلة لحرفة النجارة المصورة على حوائط مقبرة بيتوزيرس بمنطقة تونا الجبل. وقد تطرقت الدراسة للحديث عن أنواع الخشب المستخدمة في أعمال النجارة، واهتمام البطالمة بزراعة الأشجار وإنتاج الأخشاب، وتناول البحث أيضا دور النجارين، أماكن عملهم والأدوات المستخدمة في النجارة بالإضافة إلى المنتجات الخشبية المختلفة. وقد اعتمد الباحث على المنهج التحليلي الوصفي للوصول إلى أهداف الدراسة.