The archaeological research presented here forms the subject of a doctoral thesis being carried out in Aristotle University by Eugenia Gkatzogia. The plant assemblages derive from three settlements situated on the eastern coast of the Thermaic Gulf where the modern city of Thessaloniki is located. Central Macedonia, Northern Greece: Toumba Thessaloniki, Karabournaki and Polichni. The preliminary results of this archaeological study have been carried out from archaeological contexts dated in various phases of the Greek Iron Age (Early Iron Age or protogromatic and geometric: 1000–750 BC and Late Iron Age or archaic period: 700–480 BC). It seems that these sites played an important role in the area before the establishment of the city of Thessaloniki, newly built by Constantine around 316–315 BC.

In early and late Iron Age Northern Greece, a variety of cultural and socioeconomic changes are indicated by archaeological finds and data caused by various authors (e.g. Andreou and Katsoaki 1994). Transformations in social organisation are indicated e.g. by the appearance of newly founded settlements, the architectural features of the prehistoric Late Bronze Age tell sites, different patterns of community organisation (e.g. Andreou and Katsoaki 1994), different choices of the communities to praise their wealth as shown in cemeteries or in burial practices (e.g. Andreou 2012 in preparation), by an increase of contacts with the rest of the Mediterranean as shown in ceramic material and the foundation of colonies by southern Greek city-states in the last part, beginning in 8th century BC (e.g. Therioi 2000) etc. These slow processes led to an increased inequality and social stratification forming afterwards, in Late Iron Age, "state" institutions framed by local authorities that controlled wealth and mobilised labour and resources.

The main feature of the Karabournaki assemblage is the mixed plant composition of the samples. In their majority they consist of various plant parts deriving from different processing stages such as cereal chaff (e.g. glume bases) silica awns and lemma tips, rachis internodes, from crop cleaning including dehusking. Wild weed species and other plant parts (silicified parts of leaves, probably some phytoliths, culm internodes, and other straw material) from a combination of processing activities. These components of fuel and most probably were contained in dung. Cereal seeds are usually poached and distorted due to cooking exposures, exposure to high temperatures or they were digested grain fuel as fodder to animals. The extensive presence of bone in the majority of the pits and in the beehive-shaped, semi-subterranean constructions probably suggests that there were added to dung cakes. This is suggested by the fact that they could not have been fed to animals since their digestion by animals becomes very difficult.

In Toumba Thessaloniki, the assemblage is characterized by the prominence of grape pips including grape pressings e.g. from a pit in building A dated in the beginning of the archaic period. The same picture is encountered in Karabournaki as well, where serving vessels such as big banquet bowls and jugs and the characteristic local "egg-shell" fine table ware are less present in significant quantities in some pits, highlighting the role of wine in special occasions perhaps feasting. Storage rooms in Polichni were destroyed by fire that preserved stored agricultural products, mainly hulled barley and lentils. These were found without the presence of crop weeds, indicating that they were already cleaned and ready for consumption.

Plant remains were preserved mainly carbonized and in some instances, as is the case from Karabournaki, silicified. Even if the study is in its early stages, some useful remarks on the range of crops grown in the area can be made. Among free-threshing cereals, barley, usually the hulled form (both two-row and six-row), seems to hold the dominant position in the form of grains. Also naked barley is present probably in some samples. Less frequent are barley rachis internodes. Second in importance is bread/maccaroni wheat, mostly grain. Among the glume wheats, einkorn is well represented especially in the form of glume bases (e.g. from the pits of Karabournaki).

Emmer and spelt, usually grains are found as contaminants of the main crops and not as pure caches. A variety of pulses are present in the samples. Among them, bitter vetch and lentils are well represented and have been found as pure crops in Karabournaki and Polichni respectively. Great peas and broad beans are present very often in Polichni. In less quantities are found in Karabournaki. Less found in Karabournaki is chick pea. The presence of silica awns and lemma tips, not yet identified to species or genus, is impressive in the pit samples from Karabournaki. Wild seeds are present mainly in the site of Karabournaki but not yet identified to species. Among cultigens, grapes are the most common finds. Pressed grapes are present mainly in Karabournaki and in less quantities found in Toumba Thessaloniki. In Karabournaki a pit yielded a large number of pressed grape forming its main archaeological material. Despite their limited number, they may point towards the production of a local wine. This is corroborated by the significant number of local amphorae.

Archaeobotanical evidence from Iron Age deposits is rather sparse from Northern Greece consisting mainly of preliminary publications. Earlier scholars were mainly based on literary sources e.g. the Homer epics, mainly the Odyssey and the Works and Days of Hesiod to reconstruct Iron Age subsistence economy. Through the present archaeological research, combined with the textual and archaeological evidence, not yet studied in this way, we will attempt to approach people's lifestyles in the area of Central Macedonia. The range of crops already established in Northern Greece since the Bronze Age such as bread/maccaroni wheat, spelt, emmer, einkorn, hulled barley, bromacin mellet, lentil, Celtic bean, bitter vetch, grass peas and chickpeas are not different from those found in Iron Age Central Macedonia as suggested by the archaeological assemblages presented here as well as by previous work in other sites of the area (e.g. from Asinos and Kastania: Holstvedt and Zenea 1980 and Kroll 1983 respectively).

The ongoing study of the archaeobotanical material from the aforementioned sites will provide insights on plant usages, plant husbandry practices as well as other aspects of subsistence economy in Central Macedonia. Based on the research carried out so far, it seems that the specific role that each plant species played in the economy is dictated by the cultural particularities of each community.