Primary Study Of Comman Insects And Their Predators Trees In Koysinjaq Region – Irbil.

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ABSTRACT

Oak trees ,*Quercus spp* are considered as an important vegetation which naturally growth in Iraq, Kurdistan region, elevations reached ٦٠٠-١٩٠٠ m. over sea level. Its characters, slow growth, and non resistant for highly temperature. The low yields of Oak forests are returned to numerous factors, their infestation with insects pests. Field study results of the major insect pests of Oak trees in koya region that showed there are different percentage of infestation according to the kind of insect, species of tree, and the part of plant that has been infested.

It was noted that the Oak gall wasps, *Andricus spp* are high and the most important insects on the natural Oak trees , *Quercus infectoria* Oliv. (gall Oak), *Q. aegilops* L. (normal Oak) and *Q. libani* Oliv. (Liban Oak) with a mean of infestation reached (٨٨ , ٨٥ and ٤٥) % respectively, While there was a least infestation with Oak fruit weevil , *Curculia spp* a mean reached ٢٣ and ٢٠ insect on the trees of gall Oak and normal Oak of locations Kosar and Bawaji in Koysinjaq region.

The results of field study showed a highest percentage of *Euproctis melania* S . on the different parts of plants for , *Quercus infectoria* Oliv. and *Q. aegilops* L. , with a mean of ٦٦ and ٤٥ insect , respectively , While there was a lowest infestation with Oak moth , *Lymantri*a *dispar* L. with mean reached ٣ and ٢٤ insect for the same of both species of Oak . In addition to the presence of Oak steam borer, *Cermbyx dux* F., Oak fruit moth , *Cydia fagiglandana* Z. and Oak aphid , *Tuberculoides* sp. on the different Oak trees .The results showed a number of predators that attack insects was found on Oak trees and the highest density of predators where the ladybird, *Coccinella septenpunctata* L. with a mean ٢٧,٨, spiders, *Eutetranychus sexmaculatu* (٢٢,٤ %) and predator bugs, *Orius* sp.(١,٨ %).

Introduction

Quercus spp Is considered as important economic trees that is represented as gall producers, tannins, medical treatments (Mohammad et.al, ١٩٩٨, Al-Mofty, ٢٠٠٦) and utilize the trees in different of woody industrial as pulp and paper manufacturing, particleboard, lumber and polymers (Abdulla et.al,١٩٩٠, Suleman,١٩٩١, Durbak et.al ,١٩٩٨). Oak spread in the mountainous regions of the north of Iraq on ٦٠٠-٢٠٠٠ M above sea level (Al-Dawoody, ١٩٧٩) The natural Oak forests are reduced due to humans activities, shifting cultivation, uses of forests lands for agricultural purposes, heavy grazing and the low attention of people about

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the forests importance, this is in addition to the effect of insects' infestation on the forests degradation.(Graham , ١٩٦٥).

It is estimated that the total yield from the forests annually is about ١٠٠٠٠ tons of charcoal and ٢٠٠٠٠ tons of wood fuel, involving the felling of about ,٢٠٠٠ hectares of mature forest every year.

As the result we find ourselves facing a large problem that intimidates the growth and development of the forests. The most important insects pests that attack all the tree kinds of locally available Oak trees *Q. aegilops, Q. infectoria, Q libani* and may lead to their death or decline in quantity and quality of their timbers are Oak stem borer ,*Cermbyx dux* F., Oak bark beetle, *Scolytus intricatus* S.,Oak fruit moth , *Cydia fagiglandona* Z., Oak fruit weevil, *Curculia sp*. (Swailem, and Al-Maroof ,١٩٨١, Yanega,١٩٩٦). FAO (١٩٧٢) reported that spread the numerous of insects pests on Oak trees in north of Iraq, such as Oak leaf worm, *Euproctis melania* S. In Karadagh and Penjwin and Koya districts, Oak moth,*Pammene gallicolana* Z. In Gara mountain in Duhok, Oak seed weevil ,*Curculio glandium* in Irbil . In addition to the presence of ١١ species of Oak gall wasps , *Andricus spp* in the most Oak spread regions , addition to the presence of *Apion radiolus* k., With economic value in Suleimaniya region (Raeder , ١٩٦٩). Most of the Oak forests are located and wares ; therefore there have not been enough studies about the kinds and severity of infestation, as the result this study was carried to find out the most important insect pests that attack Oak trees in Haibat Sultan mountain (Bawaji and Kosar location) in Koysinjaq region , for studying their economical importance and planning for their biological control and integrated pest management technique application in the future.

Materials and methods

The field study was held to find out the most important insect pests that attack natural Oak trees in north of Iraq for mountainous regions in two basic locations , Bawaji and Kosar location on Haibet –Sultan mountainous With an elevation average(٩٠٠-١٣٠٠ M) above sea level in Koysinjaq region of Irbil governorates.

Periodical monitoring for the Oak trees and monthly sample collection was started from the beginning of flowers buds opining in the march ١٥-٠٣-٢٠٠٨ to the onset of leaf fall period in November ٢٨-١١-٢٠٠٨ during the year ٢٠٠٨. In the study ١٠ trees of each of the three locally available species in each location were randomly sampled manually from different parts of the trees, stem , branch , leaf and fruit . The common insects were identified by necked eyes or magnifying lens, in addition to symptoms on the foliage. Also some samples were examined in plant laboratory by light microscope and samples identified according to previous classification keys (Baronstev, ١٩٩٨), and depending on scientific references (Robert ١٩٧٢ , Knopf ١٩٧٢ , Swailem and Adel , ١٩٧٧ , Swailem, and Al-Maroof ,١٩٨١). The insects that were not identified by above mentioned ways; the Irbil insect museum was consulted for the purpose of identification.

In this study the predators monitored in addition to calculating the percentage of insect infestation on fruits, stem to the high of ٢ M. ١٠ leaves, and ١٠ branches, all samples taken randomly from each tree and in different direction (Arab , ٢٠٠٣) .

Numbering of living insects was done later, the infestation percent is calculated for each insect by using the following equation (Lashenko and Bavlenov , ١٩٨٨) .

$$\% \text{ Infestation} = \frac{\text{Number of infested parts by insects}}{\text{Total number of inspected parts}} \times ١٠٠$$

Results and discussion

Table (١) shows the result of field observation for the insect pests in both Kosar and Bawaji locations in Koya region during the year of ٢٠٠٨. The major insect pests that was noted on gall Oak trees , *Quercus infectoria* were gall Oak wasps , *Andricus spp* and the highest percentage of the infestiation on the Oak tree parts , stem and branch in both Kosar and Bawaji locations was ٩٠, ٩٥ and ٩٥ , ٨٠ % , respectively, then comes Oak leaf worm , *Euproctis melania* S. on leaves were ٨٠ and ٨٠ , ٨٥ %, respectively, these results agree with the report of FAO(١٩٧٢) that most spread insects on Oak trees in north of Iraq are gall Oak wasps , *Andricus spp* and Oak leaf worm , *Euproctis melania* S. Robert (١٩٧٢) reported during survey of forest insects in Iraq mentioned that there are ٢٢ species of *Andricus spp* on gall Oak ,*Quercus infectoria* and ١٥ species on *Quercus aegilops* and all parts of the tree are susceptible for infestation. Researchers in Iran mentioned that there are ٢٢ and ٢٨ species of gall Oak wasps in both Kurdistan and Kirmansha governorates respectively (Nazemi et. al ٢٠٠٨ ; Tavakoli et. al ٢٠٠٨). In addition to presence of ٢٤ species of gall wasps in different regions in Iran of which ١٣ species on gall Oak , *Q. infectoria* Oliv. and ١١ species on *Q. bratii*. Table (١) was noted that Oak moth , *Lymantri*a dispar L. and Oak fruit weevil *Curculia sp.* were present on gall Oak trees , *Q. infectoria* only in both locations with an infestation rate reached ٢٥،٢٠ and ٤٥ % , respectively. Ring et. al (١٩٩١) mentioned the presence of more than ٢٠٠٠ species of *Curculia spp* in north America which are of the major pests on broad leaves forest trees and that attack Oak fruits, pecan , walnut and nut trees, in addition the infestation to apple trees, peach, and cherry.

Robert et. al (٢٠٠٣) explained that *Curculia elephus* one of the most pests on forests trees such as *Castones* sp., and *Quercus spp* , . Table (١ and ٢) showed a simple difference of Oak stem borer *Cermtyx dux* F. on trees parts , stem and branch of gall Oak *Q. infectori*a with an infestation of ٥٠ and ٤٥ % , and on (stem , branch and fruits) normal Oak *Quercus aegilops* trees is noted with an infestation percent of ٧٥, ٣٠ and ٢٠ % , respectively, While the lowest infestation was noted on the stem of gall Oak , *Q. infectoria* was by Oak moth *Lymantria dispar* L. which reached ١٠٪. (table ١). ,Avtzis (٢٠٠١) mentioned in Greece the presence of *Lymantria dispar* L. on the fast growing poplar , *Populus spp*, in addition to presence of stem borers on Oak trees such as *Cermbyx cerdo* L. , *E. chrysothoea* in these regions .Table (٢) showed that the *Q. aegilops* infested mostly by gall insect wasps , *Andricus spp* and Oak leaf worm, *Euproctis melania* S. in both studied locations with an infestation ratio reached ٩٠ , ٨٠ and ٨٠ , ٧٥ % respectively, generally noted the lowest ratio of infestation by Oak fruit weevil *Curculia* sp.(٤٠

%) and Oak fruit moth *Cydia fagiglanduna Z.* (٣٠ ,٢٠٪) *on Q. aegilops* , Brown (١٩٦٨). Mentioned that the adult of Oak fruit weevil *Curculia* sp. appears in spring and the female penetrate the fruits by its long curved proboscis, researchers in the different parts of the world reported that both species, *Curculia occidents* and *Cydia latiferreana* were founded on the two Oak species,*Quercus agrifolia* and *Q. enyelmannii* in south of American.(Lewis ,١٩٩١،١٩٩٢ ; Swiecki et. al,١٩٩١ ; Debouzie et. al , ١٩٩٣ ,and Connell et. al ,٢٠٠٢)

Swailem and Adel (١٩٧٧) was found *Curculia* sp.and *Cydia spp* are among the wide spread insects on the three natural species of Oak ,*Q. infectoria* , *Q. aegilops , and Q. libani* in Iraqi .

In Table (٢ and ٣) sweet aphid *Tuberculoides* sp. noted on different parts of the Oak trees , on the gall Oak, *Q. infectoria* and normal Oak,*Q. aegilops.* in both Bawaji and Kosar locations with infestation reached percent ٥٥ , ٤٠ and ٣٠ , ٦٠ % respectively, Johnson and Lyon (١٩٩٤) mentioned the presence of Oak wasps ,*Callirhtis cornigera* (Hymenoptera , Cynipidae) on Oak branches in America, also mentioned the presence of leaf beetles which belongs to the family Chrysomelidae and Oak fruit weevil *Curculio* and presence of some species of aphids that attack Oak fruits which is known as *Longistigma caryae* (Hymenoptera , Aphidae). Konpf (١٩٧٢) reported in Iraq that Oak stem borer , *Cermbyx dux* F. is one of the most important pests which attack normal Oak trees , *Q. aegilops*, Table (٣) shows that infestation ratio are different according to difference in insect species and all different parts of the Oak trees, The highest infestation percent was by *Andricus spp* on the parts of gall Oak , *Q. infectoria* , stem and branches with two studded locations , that reaches ٥٠, ٦٠, and ٥٠ , ٤٠ % respectively, while the lowest infestation percent was by *Euproctis melania* S. on the Oak parts ,branches and leaves in both studied locations that reached , ٢٠ , ١٠ , ٢٠ and ٣٠ % respectively, Hirka and Csoka (٢٠٠٦) mentioned the presence of two Oak wasps species which are *Neuroterus saliens* and *Callirhytis glandium* on turkish Oak, *Quercus cervis* in Hungaria during the study of the life cycle.

From above mentioned information and through the field visits to both locations, we find out that the insect infestation were different according to species of Oak , Oak parts, and the locations, In this study the gall Oak , *Q. infectoria* was most heavily infested with insect pests followed by,*Q. aegilops* and then *Q. libani*, and also the infestation was different between the two locations where it was more in Bawaji compare to Kosar on all the three Oak species, this may be return to the topography, altitude, and the location of the area that surrounded by high mountains.

In Table (٤) we find different kinds of natural enemies, predators with insects on Oak trees in both studied locations which are, Spiders, *Eutetranychus sexmaculat* ,Ladybirds, *Coccinella septenpunctata* L. and Predator bugs, *Orius sp.* The above mentioned predators were found from March to the end of November, the mean number of predators on gall Oak trees ,*Q. infectoria* Were reached ٢٠,٩ insect, and the Spiders , *Eutetranychus sexmaculatu* had the highest density ratio which reached ٤٥,٥٪, while the predator bug had the lowest density ratio ٣,٥٪,

followed by normal Oak ,*Q. aegilops* that had the highest density reached ٢٨,٧ insect.

In general the number of predators on the *Q. libani* was less comparing to other two species *Q. infectoria* and *Q. aegilops* with a mean reached ٣,٦ , ٢٠,٩ and ٢٨,٧ insect , respectively, which may be due to the reason that *Q. libani* was present in fewer numbers as a single trees in studied location in Koya regions, On the other hand the numbers of ladybird , *Coccinella septenpunctata* L. on *Q. aegilops* were high with a mean reached ٦٦,٩ insect while the least number of predators bug, *Orius* sp. Were the *Q.libani* , respectively.

Table (٥) shows differences between the predicators number on Oak trees species, ladybird , *Coccinella septenpunctata* L. was present at highest density with a mean of ٢٧,٨ insect,followed by spiders , *Eutetranychus sexmaculatu* ٢٢,٤ insect , but the least was the predator bug, *Orius sp.* ٢,٠ , We conclude from the above that most of predators were started their activities in April which found that ladybird attacked the Oak leaf worm *Euproctis melania* also it was found that the predator bug *Orius* sp. attack Oak aphid,The ladybirds, *Coccinella septenpunctata* L. and spiders, *Eutetranychus sexmaculatu* were the most widely spread among other predators in both study locations ,Wakamura et. al (٢٠٠٧) they used the sex pheromone, Dimethyl pentedecyl-Isobut-yrate for the Oak leaf worm female, *Euproctis* sp. in field conditions that shows a significant attractions by the males.

Solomon (١٩٧٤) mentioned that there are two species of mites Tetranychidae, Acari on Oak, FAO (١٩٧٢) reported that control *Euproctis melania* S. in the north of Iraq on the Oak trees by *Bacillus spp*, while Azizhani et. al (٢٠٠٥) and Azizhani (٢٠٠٦) we reported that there are many species from parasites of Oak gall wasps on Oak trees.

TABLE ١

TABLE ٢

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References

١-Abdullah,Y.S., Al-kinnany and Al-Ashoo, J. A.(١٩٩٠).Effect of growth regulators (GA٣, IAA)and root pruning on growth of Quercus aegilops L. In Hammam Al-Alil., College of Agriculture and forestry, Mosul University, Mesopotamia J.Agric., ٢٢(٤):١٩٥-٢٠٧.

٢-Al-Dawoody, D.M.(١٩٧٩).Classification of forest trees, Al-Cutub press Mosul University, College of Agric. and Forestry, Dept.of Forestry, ٤٣٠ pp.

٣-Al- Mufty, M.T. (٢٠٠٦).Utilization of Pinus brutia Ten.and Quercus aegilops L., bark extract as adhesives for particle boards production, Ph.D. thesis, Mosul University, College of agriculture and forestry, ١٥١ pp.

٤-Arab,A.(٢٠٠٣).Preliminary survey of economic insects and their insect predators on poplar trees at Euphrates region in Syria. Arab J. Plant protection, ٢١:٣٩-٤٢.

٥-Avtzis, D.N.(٢٠٠١).Control of the most dangerous insects of Greek forests and plantation .USDA,forest service, Gen.,Tech.,Rep ٢٧٧ .

٦-Azizhani,E., Rasulian,G.R., Kharazi,P.A., Sadeghi, S.E., Tavakoli,M., and Melika, G.(٢٠٠٥). Report of eight species of parasitoid wasps belonging to chalcidoidea from Cynipid galls on Oak trees, Jour. of Entomological Society of Iran ٢٥(١):٧٩-٨٠.

٧-Azizkhani,E., (٢٠٠٦). Parasitoid fauna of Oak gall wasps in Lorestan province. Ph.D. thesis, Faculty of Agriculture, Tehran University, ٢٧٧ pp.

٨=Barontsev,A.I.(١٩٩٨).Wood destroying insects .Lesnae bromoshlennoste. Moscow, (Russian). ١٧٥ pp.

٩-Browne, F.G.(١٩٦٨).Pest and diseases of forest plantation trees, Clarendon Press, Oxford, ١١١٨ pp.

١٠-Connell, E.Dunning, Timothy, D. P. and Richard ,A. R. (٢٠٠٢). Insect-Oak interactions with coast live Oak (Quercus agrifolia) and Engelmann Oak (Q. engelmannii) at the Acorn and seedling Stage. USAD Forest Service Gen. Tech. Rep.١٨٤ pp.

١١-Debouzie, D., Heizmann, A., Humblot, L.(١٩٩٣). A statistical analysis of multiple scales insect populations: A case study. The chestnut weevil Curculio elephas. Journal of Biological system ١: ٢٣٩-٢٥٥.

١٢.Durbak, I., Green, D.W., Highley, T.L., Howard, J.L., Mckeever, D.B., Miller, R.B., Pettersen, R.C. Rowell, R.M., Simpson, W.T., Skog, K.E., White, R.H., Winandy, J.E. and Zerbe, J.I.(١٩٩٨).Wood, kirk-othmer Encyclopedia of chemical technology , Vol. ٢٥ (٤),Wiley , New York.

١٣- FAO (١٩٧٢). Iraq forest entomology. ٦٨/٥١٨. Technical Report. No.٦. Rome.

١٤- Graham, S.A. and Knight, F.B.(١٩٦٥). Principles of forest entomology. Megraw-Hill book company, New York.

١٥- Hirka, A. and Csoka, G.(٢٠٠٦).Two gall wasps, Neuroterus saliens and Callirhytis glandium causing major acorn mortality on turkish Oak, Quercus cervis in Hungary, Hungarian forest research Institute, Dept. of forest protection, Proceeding of the IUFRO, Symposium held Matrafured Hungary, (٢٠٠٤), ٢٩٦- ٣٠١ pp.

١٦- Johnson, W.T. and H.H. Lyon.(١٩٩٤). Insects that feed on trees and shrubs. Cornell University press, Ithaca, New York, ٥٦٠ pp.

١٧- Knopf, H.E. (١٩٧٢) Forest insects of Iraq., Univ. Mosul, College of Agric. and Forestry, Mesopotamia J. ٢ (١).

١٨-Lashenko, L.U. and M.P. Bavlenov.(١٩٨٨).Forest protection from insect pests and diseases. Lesnae bromoshlennost. Moscow, (Russian).٣٢٠ pp.

١٩- Lewis, V.R. (١٩٩١).The temporal and spatial distribution of filbert weevil infested a corns in an Oak woodland in marina county, USDA, ١٢٦. Berkeley, California, USA, ١٥٦-١٦٠.

٢٠-Lewis, V.R.(١٩٩٢).Within-tree distribution of a corns infested by Curculio occidentis (Coleoptera:Curculionidae) and Cydia latiferreana (Lepidoptera: Tortricidae) on the coast live Oak, Environmental Entomology ٢١: ٩٧٥-٩٨٢.

٢١-Mohammad, M. A., Ahmad, B.A. and Abdullah I. N. (١٩٩٨). Economic important of gall which composed by gall wasps on Oak trees in north of Iraq,J. Science and education(No..٣٧ , ١٩٩٩).

٢٢-Nazemi, J. Talebi, A.A., Sadeghi,S.E., Melika, George and Lozan,A. (٢٠٠٨). Species richness of Oak gall wasps (Hymenoptera: Cynipidae) and identification of associated inquilines and parasitoids on two Oak species in western Iran. North-west Jour. Of Zoology, Oradea, Roania, Vol. ٤. No. ٢, ١٨٩-٢٠٢ pp.

٢٣-Raeder, R.J.(١٩٦٩). Forest Trees in Iraq, Univ. of Mosul, College of Agric. and Forestry, ١٧٠

٢٤-Ring, D.R., L.J. Grauke, J.A. Payne, and J.W. Snow.(١٩٩١). Tree species used as hosts by becan weevil (Colroptera:Curculionidae). Jour. Of Economic Entomology, ٨٤:١٧٨٢-١٧٨٩.

٢٥-Robert, H.(١٩٧٢).Forestry research, demonstrating and training Irbil, Iraq . FO : DP / Iraq / ٦٨ / ٥١٨ Technical Report (No. ٦) ١٤٦ pp.
٢٦-Robert, C.V., Erica, E., D., Holly, H. and Margaret L. (٢٠٠٣).Mini risk assessment chestnut weevil ,Curculio elephas G.(Coleoptera:curculionidae), Dept. of entomology , Univ. of Minnesota (USDA , www.invasive .org).
٢٧- Wakamura, S. Tetsuya.Y., Yoshio H., Hiroshi T., Teruo D., Yoshitsugu N., Manabu S., Akira Y. and Kanae, K. (٢٠٠٧). Sex pheromone of the oriental tussock moth Artaxa Sub flava(B.) (Lepidoptera:Lymantriidae). Identification and field attraction. Applied Entomology and Zoology, Vol.٤٢, No. ٣ , ٣٧٥-٣٨٢ pp.
٢٨- Suleman , Y., H.(١٩٩١). Variation in vessel element size and tissue proportion in three Iraqi Oak ., J. King Saud Univ., vol. ٣, Agric. Sci.(١): ٥٩-٦٦.
٢٩- Solomon , J.D.(١٩٧٤).Biology and damage of the hickory borer, Goes pulcher, in hickory and pecan .Annals of the entomology society of America ٦٧: ٢٥٧ - ٢٦٠.
٣٠- Swailem, S.M. and Adel. H. A. (١٩٧٧).Forest insects and their host plants in Iraq , Univ. of Mosul, College of Agric. and Forestry, ٣٤ pp.
٣١- Swailem, S.M. I.N. Al -Maroof. I.N.(١٩٨١). Forest entomology, College of Agriculture. Mosul University.
٣٢- Swiecki, T.J., Bernhardt, E.A., Arnold, R.A. (١٩٩١). Insects and disease impact on blue Oak acorns and seedlings. USDA :١٢٦ Berkeley. USA, ١٤٩-١٥٥.
٣٣.Tavakoli, M.Melika, G.,Sadeghi, S.E., Penzes, Z., Assareh, M.A.Atkinson, R., Bechtold, M., Miko, I., Zargaran, M.R., Aligolizadeh, D., Barimani, H., Bihari, P., Pirozi, F., Fulop, D., Somogyi, K. Challis, R., Preuss, S., Nicholls, J. and Stone, G.N.(٢٠٠٨). New species of Oak gall wasps from Iran (Hymenoptera:Cynipidae:Cynipini)-Zootaxa ١٦٩٩: ١-٦٤.
٣٤-Yanega, D.(١٩٩٦).Field guide to north eastern long horned beetles (Coleoptera:Cerambycidae) Natural History Survey, Champaign, ١٧٤ pp.

دراسة أولية للحشرات الشائعة ومفترساتها على أشجار البلوط النامية طبيعيا في منطقة كويسنجق – اربيل

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الخلاصة

تعد أشجار البلوط من ابرز أنواع الغطاء النباتي النامية طبيعيا في المناطق الشمالية من العراق في ارتفاعات تصل ٦٠٠-١٩٠٠ متر فوق مستوى سطح البحر وتتصف كونها بطيئة النمو ومحبة للضوء وغير مقاومة لدرجات الحرارة العالية ويرجع انخفاض إنتاجية غابات البلوط الاقتصادية إلى عوامل عديدة منها ، إصابتها بآفات حشرية مختلفة ، وقد أظهرت نتائج الدراسة الحقلية وجود اختلافات في معدلات الإصابة تبعا لنوع الحشرة ونوع الشجرة والجزء النباتي المصاب حيث وجد أن زنابير أورام البلوط كانت أكثرها وجودا على أشجار بلوط العفص ، البلوط العادي والبلوط اللبناني بنسبة إصابة بلغت ٨٨ ، ٨٥ و٤٥ % على التوالي ، بينما اقل إصابة كانت لسوسة ثمار البلوط يليها سوسة البلوط بمتوسط بلغ ٢٣ و ٢٠ حشرة على أشجار بلوط العفص والبلوط العادي في موقعي باواجي وكوسار على التوالي، كما أظهرت الدراسة أيضا وجود نسب إصابة عالية لقارضة أوراق البلوط على جميع أجزاء شجرة بلوط العفص والبلوط العادي بمتوسط بلغ ٦٦ و ٤٥ حشرة على التوالي ، فيما لوحظ اقل نسب إصابة لحشرة فراشة الغجر بمتوسط ٣ و ٢٤ حشرة لكلا النوعين من البلوط على التوالي . أظهرت الدراسة الحقلية أيضا وجود حفار ساق البلوط ذو القرون الطويلة و فراشة ثمار البلوط ومن السما على أنواع البلوط الثلاثة، كما وجد عدد من المفترسات على حشرات البلوط المختلفة وهي الدعاسيق بمتوسط بلغ ٢٧,٨ ، العناكب ٢٢,٤ والبق المفترس ١,٨.