

## A CONTRIBUTION TO THE KNOWLEDGE OF THE CYNIPINI FAUNA OF TURKEY (HYMENOPTERA: CYNIPIDAE)

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**ABSTRACT:** In SW part of Turkey (Antalya, Burdur, Isparta, Denizli, Aydın, Muğla) by fields studies in April-July 2002, 718 gall samples belong to the tribus Cynipini were collected. By description of 30 species of 7 genus belong to this tribus were determined. *Andricus solitarius* (Boyer De Fonscolombe, 1832) is the second report for Turkey. The distribution of each species in the research area were given in maps.

**KEY WORDS:** Cynipini, Cynipidae, Fauna, SW Turkey

The Cynipidae is one of the largest families of the Cynipoidea. About 1400 species are known worldwide (Ronquist, 1999). This number of valid species recorded from Europe and contiguous territories including North Africa and Turkey is less than 300 (Dalla-Tore & Kieffer, 1910; Ionescu, 1957; Stone et al., 2002; Nieves-Aldrey, 2001). Historically the fauna of Cynipidae from Eastern Mediterranean, Near East and Turkey has been studied poorly. There are a few records of Cynipidae from Turkey in the work of Dalla-Tore & Kieffer (1910). The other studies were mostly carried out on oak galls and forest pests in Turkey (Bodenheimer, 1941; Acatay, 1943; Schimitschek, 1944; Alkan, 1952; Çanakçıoğlu, 1956; Karaca, 1956). In these studies, Bodenheimer (1941) recorded 21 species belonging to 5 genus, Acatay (1943) 24 species belonging to 5 genus, Schimitschek (1944) 22 species belonging to 5 genus, Alkan (1952) 32 species belonging to 6 genus, Çanakçıoğlu (1956) 3 species belonging to 1 genus and Karaca (1956) 21 species belonging to 5 genus.

### MATERIALS AND METHOD

All galls were collected from South-West region of Turkey in 2002 and they were collected using special scissors. Galls were put in plastic bags including moist pellets and covered with tulle. Emerged adults were preserved in 70% alcohol. The drawings of gall structures were made by stereomicroscope with a drawing tube. Distribution maps of species were given in the studied area.

## RESULTS

### ***Andricus aries* Giraud, 1859**

**Materials:** ISPARTA: 2 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002 (Figure 1a).

**Host:** *Ouercus pubescens*

### ***Andricus callidoma* (Hartig, 1881)**

**Materials:** BURDUR: 2 galls, Altınyayla (Between Altınyayla-Göhlhisar 10.km) 37°01'N, 29°32'E, 1278m, 23.04.2002; ISPARTA: 1 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002 (Figure 1b).

**Host:** *Ouercus pubescens*

### ***Andricus caputmedusae* (Hartig, 1843)**

**Materials:** BURDUR: 6 galls, Altınyayla (Between Altınyayla-Göhlhisar 10.km) 37°01'N, 29°32'E, 1278m, 23.04.2002; ISPARTA: 10 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002, 23.04.2002; 8 galls, Yalvaç (Between Bahtiyar-Madenli), 38°10'N, 31°08'E, 1070m, 25.05.2002 (Figure 1c).

**Host:** *Ouercus pubescens*, *Q. infectoria*.

### ***Andricus ceconii* Kieffer, 1901**

**Materials:** ANTALYA: 15 galls, Korkuteli (towards to Elmalı) 37°00'N, 30°10'E, 1155m, 26.05.2002; BURDUR: 40 galls, Altınyayla (Between Altınyayla-Göhlhisar 10.km) 37°01'N, 31°17'E, 1278m, 23.04.2002; ISPARTA: 15 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002; 8 galls, Yalvaç (Between Bahtiyar-Madenli), 38°10'N, 31°08'E, 1070m, 25.05.2002 (Figure 1d).

**Host:** *Ouercus pubescens*, *Q. trojana*, *Q. cerris*.

### ***Andricus conglomeratus* (Giraud, 1859)**

**Materials:** BURDUR: 15 galls, Yeşilova (Bayındır village), 37°39'N, 29°45'E, 1030m, 20.06.2002; DENİZLİ: 6 galls, Buldan (Between Süleymanlı-Aktaş) 38°02'N, 28°44'E, 1150m, 20.04.2002; 12 galls, Çivril (Yahyalı village), 38°08'N, 29°32'E, 1000m, 28.05.2002; ISPARTA: 11 galls, Eğirdir (near to Kovada lake), 37°37'N, 30°52'E, 930m, 21.06.2002 (Figure 1e).

**Host:** *Ouercus pubescens*.

### ***Andricus coriarius* (Hartig, 1843)**

**Materials:** ANTALYA: 4 galls, Korkuteli (towards to Elmalı) 37°00'N, 30°10'E, 1155m, 26.05.2002; 4 galls, Gazipaşa (Kahyalar village), 36°18'N, 32°16'E, 13m, 27.06.2002; 4 galls, Gazipaşa (Kaledran) 36°06'N, 32°23'E, 33m, 27.06.2002; BURDUR: 3 galls, Altınyayla (Between Altınyayla-Göhlhisar 10.km) 37°01'N, 29°32'E, 1278m 23.04.2002; 5 galls Karamanlı (near to Karamanlı barrage) 37°25'N, 29°49'E, 1200m; 20.06.2002; DENİZLİ: 6 galls, Tavas (Kızılcaabölük), 37°36'N, 29°00'E, 945m; 22.06.2002; ISPARTA: 3 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002, 4 galls, Yalvaç (Between Bahtiyar-Madenli), 38°10'N, 31°08'E, 1070m, 25.05.2002 (Figure 1f).

**Host:** *Ouercus pubescens*, *Q. petraea*.

### ***Andricus coronatus* (Giraud, 1859)**

**Materials:** ANTALYA: 3 galls, Gazipaşa (Kahyalar village), 36°18'N, 32°16'E, 13m, 27.06.2002; DENİZLİ: 2 galls, Çameli (Çamlıbel village) 37°11'N, 29°21'E, 1130m, 22.06.2002; ISPARTA: 2 galls, Eğirdir (Beydere village), 37°54'N, 30°45'E, 1086m, 19.06.2002; MUĞLA: 2 galls, Milas, (Kayabaşı village), 37°21'N, 27°52'E, 425m, 23.06.2002 (Figure 1g).

**Host:** *Ouercus pubescens*.

***Andricus curtisii* (Müller, 1870)**

**Materials:** ANTALYA: 2 galls, (Termessos National Park), 37°02'N, 30°27'E, 600m, 26.06.2002; AYDIN: 3 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; 2 galls, Buharkent (Ortaköy), 37°58'N, 28°45'E, 570m, 27.05.2002; BURDUR: 2 galls, Altınyayla (Between Altınyayla-Göhlhisar 10.km) 37°01'N, 29°32'E, 1278m 23.04.2002; 3 galls Karamanlı (near to Karamanlı barrage) 37°25'N, 29°49'E, 1200m; 20.06.2002; DENİZLİ: 2 galls, Çal (Selcen village), 38°06'N, 29°20'E, 940m; 20.04.2002; 1 galls, Buldan (near to Buldan barrage), 38°09'N, 29°09'E, 595m; 20.04.2002; 2 galls, Buldan (Derbent village), 38°07'N, 28°48'E, 585m; 28.05.2002; 2 galls, Tavas (Kızılca bölük), 37°36'N, 29°00'E, 945m; 22.06.2002; ISPARTA: 3 galls, Yalvaç (Between Bahtiyar-Madenli), 38°10'N, 31°08'E, 1070m, 25.05.2002 (Figure 1h).

**Host:** *Quercus pubescens*, *Q. pedunculata*.

***Andricus curvator* Hartig, 1840**

**Materials:** AYDIN: 4 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; 2 galls, Buharkent (Ortaköy), 37°58'N, 28°45'E, 570m, 27.05.2002; BURDUR: 4 galls, Karamanlı (near to Karamanlı barrage) 37°25'N, 29°49'E, 1200m; 20.06.2002; DENİZLİ: 2 galls, Çal (Selcen village), 38°06'N, 29°20'E, 940m; 20.04.2002 (Figure 1i).

**Host:** *Quercus petraea*.

***Andricus grossulariae* Giraud, 1859**

**Materials:** ANTALYA: 2 galls, Elmalı (Çobanhisar village), 37°52'N, 30°01'E, 1170m; 26.05.2002; AYDIN: 1 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; BURDUR: 6 galls, Altınyayla (Between Altınyayla-Göhlhisar 10.km) 37°01'N, 29°32'E, 1278m 23.04.2002; DENİZLİ: 25 galls, Buldan (near to Buldan barrage), 38°09'N, 29°09'E, 595m; 20.04.2002; Çameli (İmamlar village), 37°06'N, 29°21'E, 1330m; 22.06.2002. 2 galls, Güney (Aydoğdu village), 38°09'N, 28°57'E, 861m, 28.05.2002; ISPARTA: 3 galls, Yalvaç (Between Bahtiyar-Madenli), 38°10'N, 31°08'E, 1070m, 25.05.2002 (Figure 1j).

**Host:** *Quercus cerris*.

***Andricus infectorius* (Hartig, 1843)**

**Materials:** AYDIN: 5 galls, Söke (Sazhköy village), 37°48'N, 27°28'E, 35m; 21.04.2002; 5 galls, Söke (Karahayıt village), 37°35'N, 27°27'E, 110m; 23.06.2002; BURDUR: 5 galls, Göhlhisar, 37°07'N, 29°36'E, 960m; 23.04.2002; MUĞLA: 2 galls, Milas, (Kayabaşı village), 37°21'N, 27°52'E, 425m, 23.06.2002; DENİZLİ: 4 galls, Buldan (Between Süleymanlı-Aktaş) 38°02'N, 28°44'E, 1150m, 20.04.2002; ISPARTA: 3 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002; 11 galls, Eğirdir (near to Kovada lake), 37°37'N, 30°52'E, 930m, 21.06.2002; MUĞLA: 1 galls, Marmaris (Aksaz village), 36°57'N, 28°25'E, 370m, 25.06.2002; 2 galls, Köyceğiz (Hamitköy village), 36°56'N, 28°25'E, 13m, 25.06.2002 (Figure 2a).

**Host:** *Quercus pubescens*, *Q. pedunculata*, *Q. robur*.

***Andricus kollari* (Hartig, 1843)**

**Materials:** AYDIN: 3 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; BURDUR: 2 galls, Bucak (Çobanpınarı village), 37°27'N, 30°46'E, 610m, 21.06.2002; DENİZLİ: 2 galls, Buldan (Bozalan village), 38°05'N, 28°51'E, 614m, 28.05.2002; ISPARTA: 3 galls, Eğirdir (Ağıl village) 37°48'N, 29°54'E, 1130m, 23.04.2002; 2 galls, Ağlasun (Çamlıdere village) 37°39'N, 30°41'E, 888m, 25.05.2002; 2 galls, Eğirdir (Akbelenli village) 37°34'N, 30°51'E, 985m, 21.06.2002 (Figure 2b).

**Host:** *Quercus pubescens*, *Q. vulcanica*, *Q. petraea*.

***Andricus lignicolus* (Hartig, 1840)**

**Materials:** BURDUR: 1 galls, Bucak (Çobanpınarı village), 37°27'N, 30°46'E, 610m, 21.06.2002; DENİZLİ: 2 galls, Buldan (Bozalan village), 38°05'N, 28°51'E, 614m,

28.05.2002; ISPARTA: 1 galls, Eğirdir (Ağıl village) 37°48'N, 29°54'E, 1130m, 23.04.2002 (Figure 2c).

**Host:** *Quercus pedunculata*.

### ***Andricus lucidus* (Hartig, 1843)**

**Materials:** ANTALYA: 2 galls, Gazipaşa (Güneyköy village), 36°09'N, 32°26'E, 190m, 27.06.2002. BURDUR: 4 galls, Gölhisar (Yamadı village), 37°07'N, 29°36'E, 960m, 22.06.2002. DENİZLİ: 2 galls, Güney (Aydoğdu village), 38°09'N, 28°57'E, 861m, 28.05.2002. 1 galls, Çameli (Çamlıbel village) 37°11'N, 29°21'E, 1130m, 22.06.2002 (Figure 2d).

**Host:** *Quercus pubescens*, *Q. petraea*.

### ***Andricus polycerus* (Giraud, 1859)**

**Materials:** DENİZLİ: 3 galls, Çameli (Çamlıbel village) 37°11'N, 29°21'E, 1130m, 22.06.2002 (Figure 2e).

**Host:** *Quercus pubescens*, *Q. robur*.

### ***Andricus quercustozae* (Bosc, 1792)**

**Materials:** AYDIN: 5 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; 4 galls, Karpuzlu (Between Hatıpkışlaşı-Çamköy), 37°01'N, 29°32'E, 1278m, 23.06.2002; 4 galls, Karacasu (Dandalaş village) 37°43'N, 28°38'E, 412m, 22.06.2002; BURDUR: 6 galls, Altınyayla (Between Altınyayla-Gölhisar 10.km) 37°01'N, 29°32'E, 1278m 23.04.2002; 3 galls, Yeşilova (Işıklar village), 37°22'N, 28°46'E, 1180m 20.06.2002; 3 galls, Karamanlı (near to Karamanlı barrage) 37°25'N, 29°49'E, 1200m; 20.06.2002; DENİZLİ: 2 galls, Çal (Selcen village), 38°06'N, 29°20'E, 940m; 20.04.2002; 4 galls, Buldan (Derbent village), 38°07'N, 28°48'E, 585m; 28.05.2002; 1 galls, Güney (Between Güney-Çal 4. km) 38°09'N, 29°07'E, 810m; 28.05.2002; 2 galls, Çameli (Çamlıbel village) 37°11'N, 29°21'E, 1130m, 22.06.2002; 2 galls, Tavas (Kızılcaölük), 37°36'N, 29°00'E, 945m; 22.06.2002; 2 galls, Tavas (Akyar village), 37°36'N, 29°08'E, 1090m; 22.06.2002; ISPARTA: 2 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38° 13'N, 31° 17'E, 1130m, 23.04.2002. MUĞLA: 1 galls, Dalaman (Kapıgargın village), 36°01'N, 28°50'E, 21m, 22.04.2002 (Figure 2f).

**Host:** *Quercus pubescens*, *Q. pedunculata*, *Q. infectoria*.

### ***Andricus seckendorfi* (Wachtl, 1879)**

**Materials:** ANTALYA: 2 galls, Elmalı (Avlanbeli), 36°32'N, 29°59'E, 1120m, 26.05.2002; 1 galls, Manavgat (Hocalar village, Sarısu), 36°52'N, 31°15'E, 22m, 26.06.2002; AYDIN: 5 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; BURDUR: 6 galls, Altınyayla (Between Altınyayla-Gölhisar 10.km) 37°01'N, 29°32'E, 1278m 23.04.2002; ISPARTA: 2 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38° 13'N, 31° 17'E, 1130m, 23.04.2002; Yalvaç (Between Bahtiyar-Madenli), 38° 10'N, 31°08'E, 1070m, 25.05.2002 (Figure 2g).

**Host:** *Quercus pubescens*, *Q. petraea*.

### ***Andricus solitarius* (Boyer De Fonscolombe, 1832)**

**Materials:** AYDIN: 1 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; BURDUR: 1 galls, Bucak (Çobanpınarı village), 37°27'N, 30°46'E, 610m, 21.06.2002 (Figure 2h).

**Host:** *Quercus pedunculata*.

### ***Andricus stefanii* (Kieffer, 1897)**

**Materials:** DENİZLİ: 3 galls, Buldan (Between Süleymanlı-Aktaş) 38°02'N, 28°44'E, 1150m, 20.04.2002; ISPARTA: 2 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38° 13'N, 31° 17'E, 1130m, 23.04.2002 (Figure 2i).

**Host:** *Quercus infectoria*.

***Andricus tomentosus* (Trotter, 1901)**

**Materials:** ANTALYA: 2 galls, Gazipaşa, (Kahyalar village, Bıçakçı stream), 36° 17'N, 32°17'2"E, 20m, 27.06.2002. DENİZLİ: 2 galls, Buldan (Between Süleymanlı-Aktaş) 38°02'N, 28°44'E, 1150m, 20.04.2002; 1 galls, Buldan (near to Buldan barrage), 38°09'N, 29°09'E, 595m; 20.04.2002; 1 galls, Güney (Aydoğdu village), 38°09'N, 28°57'E, 861m, 28.05.2002; 2 galls, Güney (Between Güney-Çal, 4.km), 38°09'N, 29°07'E, 810m, 28.05.2002; 2 galls, Çardak, (Çalti), 37°44'N, 29°44'E, 920m, 20.06.2002; 4 galls, Tavas (Kızılcabölük), 37°36'N, 29°00'E, 945m; 22.06.2002; ISPARTA: 2 galls Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38° 13'N, 31° 17'E, 1130m, 23.04.2002; MUĞLA: 5 galls, Milas, (Kayabaşı village), 37°21'N, 27°52'E, 425m, 23.06.2002; 1 galls, Marmaris (Aksaz village), 36°55'N, 28°25'E, 108m, 25.06.2002 (Figure 2j).

**Host:** *Quercus pubescens*, *Q. pedunculata*

***Aphelonyx cerricola* (Giraud, 1859)**

**Materials:** AYDIN: 4 galls, Buharkent (Between Buharkent-Aktaş), 37°19'N, 28°45'E, 600m, 20.04.2002; BURDUR: 5 galls, Bucak (Çobanpınarı village), 37°27'N, 30°46'E, 610m, 21.06.2002; DENİZLİ: 2 galls, Buldan (near to Buldan barrage), 38°09'N, 29°09'E, 595m; 20.04.2002; ISPARTA: 2 galls, Eğirdir (Between Kırıntı-Akbelenli arası), 37°36'N, 30°51'E, 975m; 20.04.2002 (Figure 3a).

**Host:** *Quercus cerris*.

***Biorhiza pallida* (Olivier, 1791)**

**Materials:** BURDUR: 15 galls Karamanlı (near to Karamanlı barrage) 37°25'N, 29°49'E, 1200m; 20.06.2002; DENİZLİ: 8 galls, Buldan (near to Buldan barrage), 38°09'N, 29°09'E, 595m; 20.04.2002; ISPARTA: 21 galls, Eğirdir (Between Kırıntı-Akbelenli arası), 37°36'N, 30°51'E, 975m; 20.04.2002 (Figure 3b).

**Host:** *Quercus pubescens*.

***Cynips agama* Hartig, 1840**

**Materials:** BURDUR: 4 galls, Çavdır (Towards to Kozağaç), 37°07'N, 29°41'E, 1035m; 22.06.2002; Çavdır (Yamadiburnu), 37°09'N, 29°36'E, 975m; 22.06.2002 (Figure 3c)

**Host:** *Quercus petraea*.

***Cynips quercus* (Fourcroy, 1785)**

**Materials:** AYDIN: 6 galls, Buharkent (Ortaköy), 37° 58'N, 28°45'E, 570m, 27.05.2002; DENİZLİ: 3 galls, Çameli (Çamlıbel village) 37°11'N, 29°21'E, 1130m, 22.06.2002; ISPARTA: 2 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38° 13'N, 31° 17'E, 1130m, 23.04.2002 (Figure 3d).

**Host:** *Quercus petraea*.

***Cynips quercusfolii* (Linnaeus, 1758)**

**Materials:** ANTALYA: 3 galls, Gazipaşa (Karahmetler village), 36°11'N, 32°25'E, 214m, 27.06.2002; AYDIN: 6 galls, Buharkent (Ortaköy), 37°58'N, 28°45'E, 570m, 27.05.2002; BURDUR: 4 galls, Gölhisar (Gölhisar-Çavdır 3.km), 37°07'N, 29°29'E, 1040m, 22.06.2002; DENİZLİ: 3 galls, Aktaş, 38°00'N, 28°44'E, 750m, 20.04.2002; 2 galls Acıpayam (Eskiler village), 37°12'N, 29°20'E, 1150m, 22.06.2002; 1 galls Acıpayam (Çakır village), 37°18'N, 29°20'E, 830m, 22.06.2002; 2 galls, Tavas (Kızılcabölük), 37°36'N, 29°00'E, 945m; 22.06.2002; ISPARTA: 2 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38° 13'N, 31° 17'E, 1130m, 23.04.2002. MUĞLA: 2 galls, Milas, (Kayabaşı village), 37°21'N, 27°52'E, 425m, 23.06.2002 (Figure 3e).

**Host:** *Quercus petraea* *Q. macrolepis*.

***Neuroterus lanuginosus* Giraud, 1859**

**Materials:** AYDIN: 12 galls, Buharkent (Ortaköy), 37°58'N, 28°45'E, 570m, 27.05.2002; BURDUR: 14 galls, Bucak (Çobanpınarı village), 37°27'N, 30°46'E, 610m, 21.06.2002;

DENİZLİ: 8 galls, Buldan (Bozalan village), 38°05'N, 28°51'E, 614m, 28.05.2002; ISPARTA: 10 galls, Eğirdir (Ağıl village) 37°48'N, 29°54'E, 1130m, 23.04.2002 (Figure 3f)

**Host:** *Quercus cerris*.

### ***Neuroterus numismalis* (Geofroy ve Fourcroy, 1785)**

**Materials:** ANTALYA: 12 galls, Korkuteli (Sögütçük village), 37°02'N, 30°10'E, 904m; 26.05.2002; 8 galls, Gazipaşa (Macarköy, Beyrebucak), 36°14'N, 32°21'E, 44m; 27.06.2002; AYDIN: 3 galls, Buharkent (Ortaköy), 37°58'N, 28°45'E, 570m, 27.05.2002; 5 galls, Söke (Karahayıt village), 37°35'N, 27°27'E, 110m; BURDUR: 8 galls, Bucak (Çobanpınarı village), 37°27'N, 30°46'E, 610m, 21.06.2002; 5 galls, Ağlasun (Çamlıdere village) 37°39'N, 30°41'E, 888m, 25.05.2002; DENİZLİ: 15 galls, Buldan (Derbent village), 38°07'N, 28°48'E, 585m; 28.05.2002; 10 galls, Buldan (Bozalan village), 38°05'N, 28°51'E, 614m, 28.05.2002; 5 galls, Buldan (Between Bozalan-Doğanköy), 38°07'N, 28°56'E, 817m, 28.05.2002; ISPARTA: 7 galls, Eğirdir (Ağıl village) 37°48'N, 29°54'E, 1130m, 23.04.2002; 12 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002 (Figure 3g).

**Host:** *Quercus petraea Q. pubescens*.

### ***Neuroterus quercusbaccarum* (Linnaeus, 1758)**

**Materials:** AYDIN: Karpuzlu (Between Hatipkişlası-Çamköy), 37°01'N, 29°32'E, 1278m, 23.06.2002; BURDUR: 15 galls, Gölhisar (Between Gölhisar-Çameli 6.km) 37°08'N, 29°29'E, 1160m, 22.06.2002; ISPARTA: 19 galls, Yalvaç, (Yalvaç, Bağkonak, Sultan Mountain), 38°13'N, 31°17'E, 1130m, 23.04.2002 (Figure 3h).

**Host:** *Quercus pubescens, Q. pedunculata*.

### ***Plagiotrochus quercusilicis* (Fabr., 1798)**

**Materials:** DENİZLİ: 4 galls, Cankurtaran (Honaz Mountain), 37°40'N, 29°13'E, 918m, 22.05.2002; Tavas (Towards to Denizli, 6.km) 37°35'N, 29°06'E, 1116m, 22.05.2002 (Figure 3i).

**Host:** *Quercus coccifera*.

### ***Pseudoneuroterus macropterus* (Hartig, 1843)**

**Materials:** AYDIN: 1 galls, Buharkent (Ortaköy), 37°58'N, 28°45'E, 570m, 27.05.2002; 2 galls, Karpuzlu (Between Hatipkişlası-Çamköy), 37°01'N, 29°32'E, 1278m, 23.06.2002; DENİZLİ: 3 galls, Buldan (Bozalan village), 38°05'N, 28°51'E, 614m, 28.05.2002; 1 galls, Tavas (Akyar village), 37°36'N, 29°08'E, 1090m; 22.06.2002 (Figure 3j)

**Host:** *Quercus cerris*.

## DISCUSSIONS

In this study, 30 species belonging to 7 genus from tribe Cynipini, were recorded and the drawings of gall structures were given. *Andricus solitarius* was recorded only by Baş (1970) in Belgrad forest in Istanbul. It is recorded the second time for Turkey, from South-West part of Turkey. *Andricus callidoma*, *Andricus ceconii*, *Andricus conglomeratus*, *Andricus coriarius*, *Andricus coronatus*, *Andricus curtisii*, *Andricus kollari*, *Andricus lignicolus*, *Andricus polycerus*, *Andricus seckendorfi*, *Andricus solitarius*, *Aphelonyx cerricola*, *Biorhiza pallida*, *Cynips agama*, *Cynips quercusfolii*, *Neuroterus lanuginosus*, *Neuroterus numismalis*, *Neuroterus quercusbaccarum* and *Pseudoneuroterus macropterus* are recorded first time in South-West part of Turkey.

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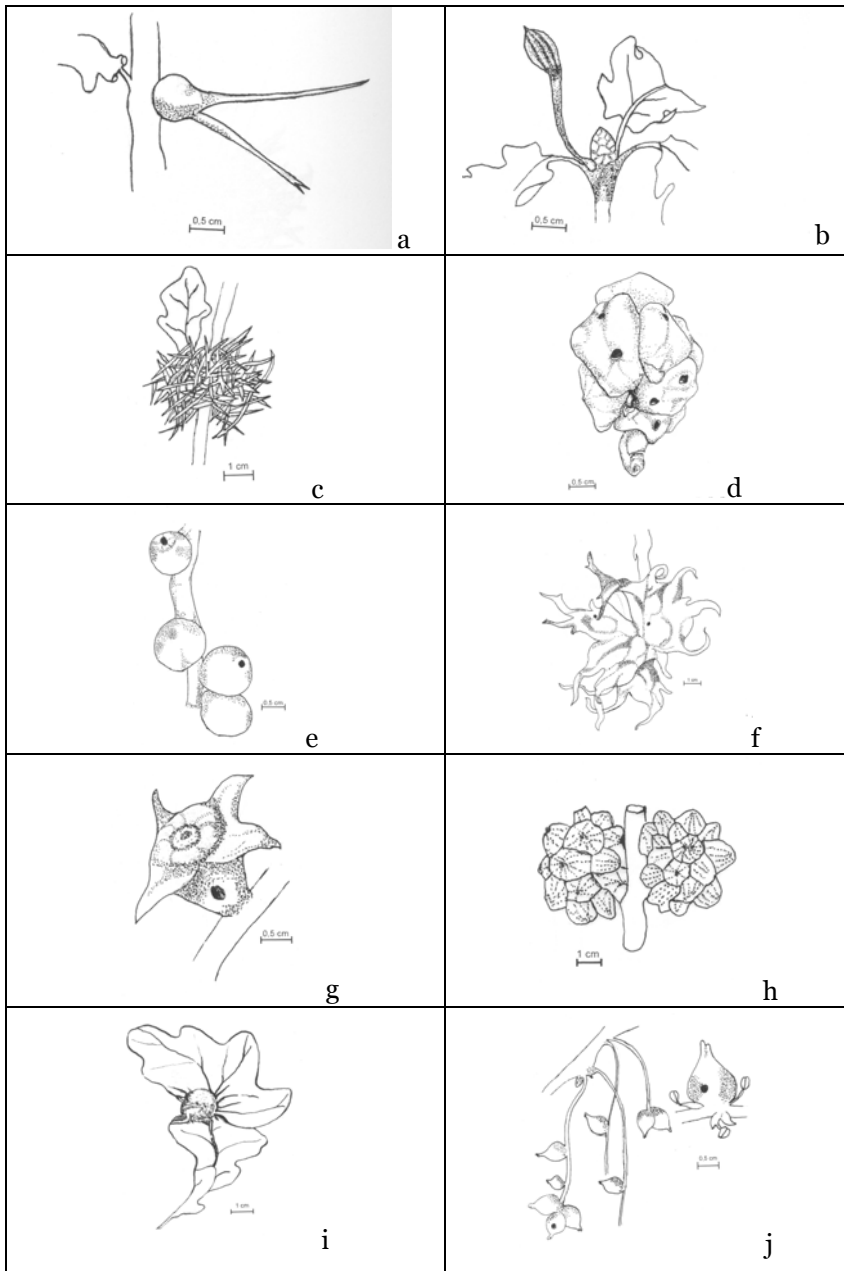


Figure 1. External morphology of gall structures (a. *Andricus aries* (Hartig, 1843); b. *Andricus callidoma* (Hartig, 1881); c. *Andricus caputmedusae* (Hartig, 1843); d. *Andricus ceconii* Kieffer, 1901; e. *Andricus conglomeratus* (Giraud, 1859); f. *Andricus coriarius* (Hartig, 1843); g. *Andricus coronatus* (Giraud, 1859); h. *Andricus curtisii* (Müller, 1870); i. *Andricus curvator* Hartig, 1840; j. *Andricus grossulariae* Giraud, 1859).



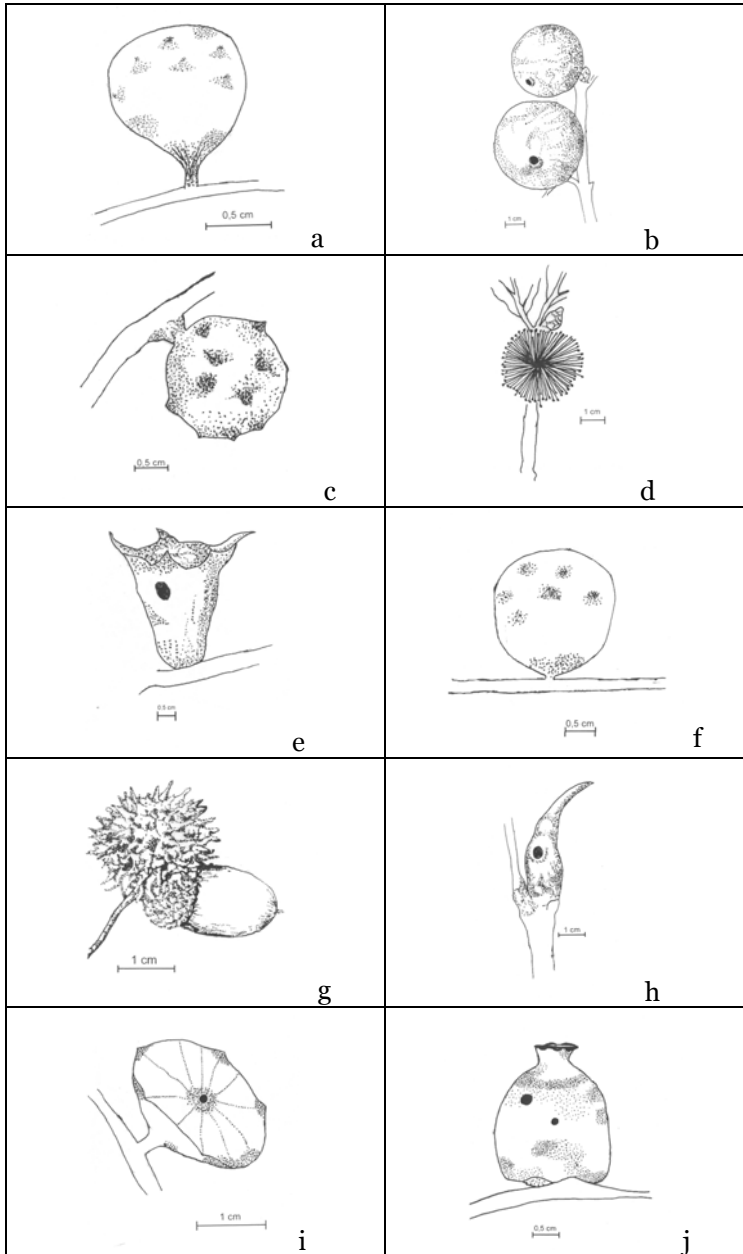


Figure 2. External morphology of gall structures (a. *Andricus infectorius* (Hartig, 1843); b. *Andricus kollari* (Hartig, 1843); c. *Andricus lignicolus* (Hartig, 1840); d. *Andricus lucidus* (Hartig, 1843); e. *Andricus polycerus* (Giraud, 1859); f. *Andricus quercustozae* (Bosc, 1792); g. *Andricus seckendorfi* (Wachtl, 1879); h. *Andricus solitarius* (Boyer De Fonscolombe, 1832); i. *Andricus stefanii* (Kieffer, 1897); j. *Andricus tomentosus* (Trotter, 1901)).

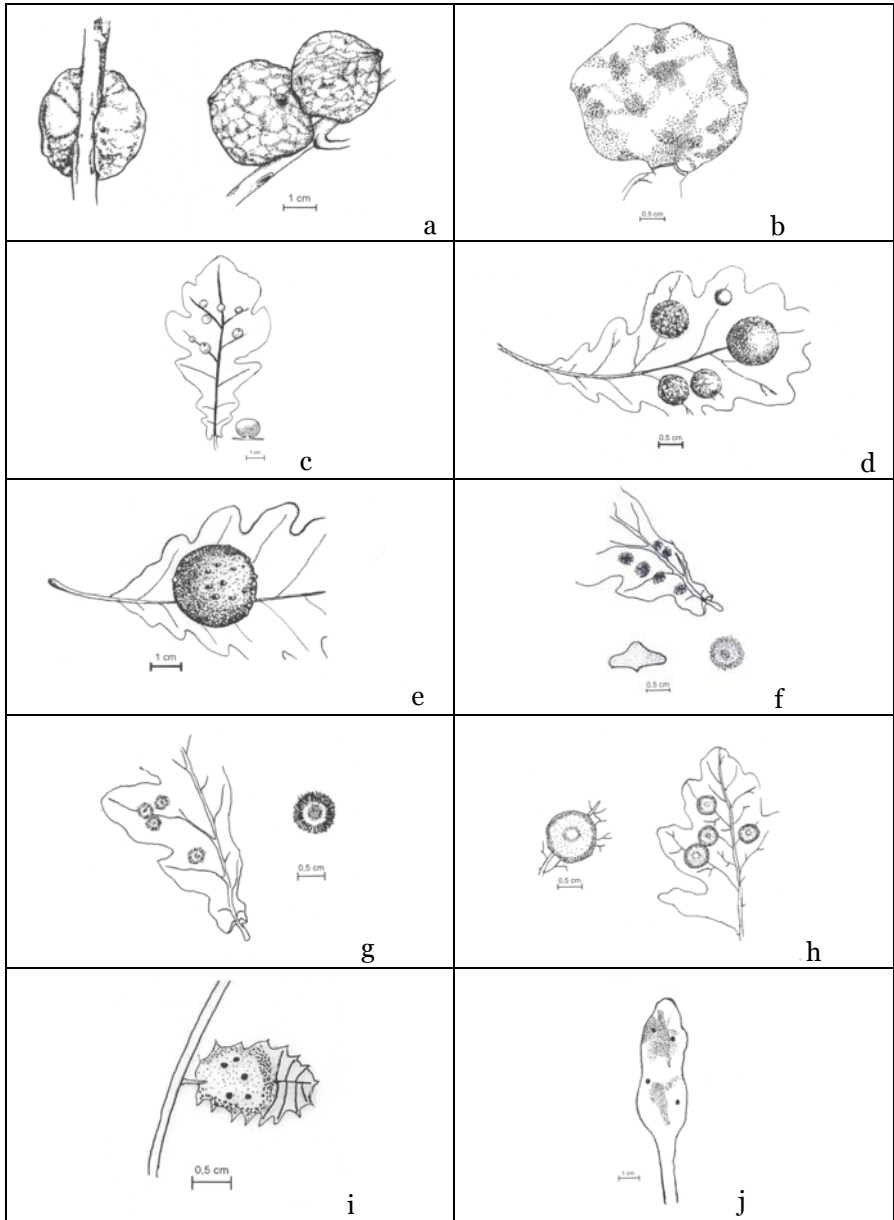


Figure 3. External morphology of gall structures (a. *Aphelonyx cerricola* (Giraud, 1859); b. *Biorhiza pallida* (Olivier, 1791); c. *Cynips agama* Hartig, 1840; d. *Cynips quercus* (Fourcroy, 1785); e. *Cynips quercusfolii* (Linnaeus, 1758); f. *Neuroterus lanuginosus* Giraud, 1859; g. *Neuroterus numismalis* (Geofroy ve Fourcroy, 1785); h. *Neuroterus quercusbaccarum* (Linnaeus, 1758); i. *Plagiotrochus quercusilicis* (Fabr., 1798); j. *Pseudoneuroterus macropterus* (Hartig, 1843)).

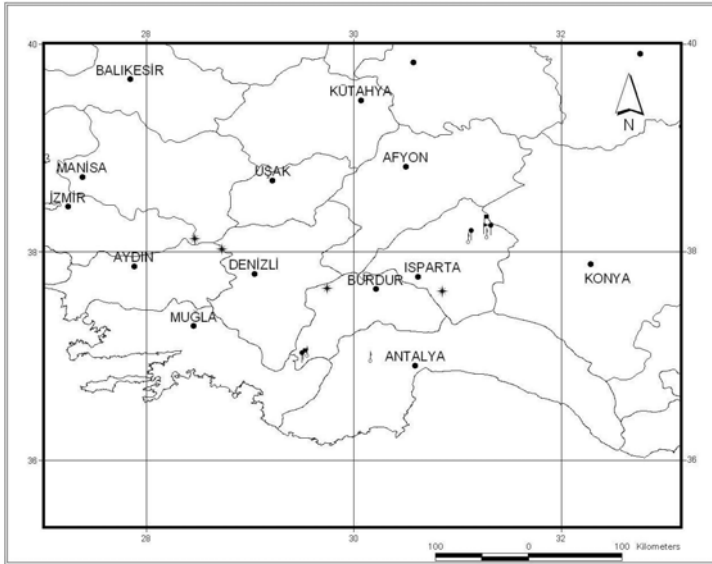


Figure 4. Distribution map of records in the research area; *Andricus aries* (◻), *Andricus callidoma* (●), *Andricus caputmedusae* (▲), *Andricus ceconii* (◊), *Andricus conglomeratus* (★)

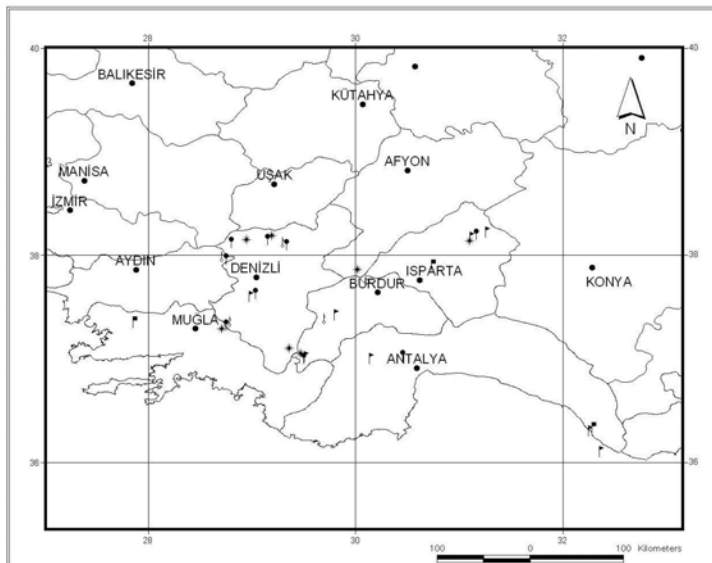


Figure 5. Distribution map of records in the research area; *Andricus coriarius* (◻), *Andricus coronatus* (●), *Andricus curtisii* (▲), *Andricus curator* (◊), *Andricus grossulariae* (★)

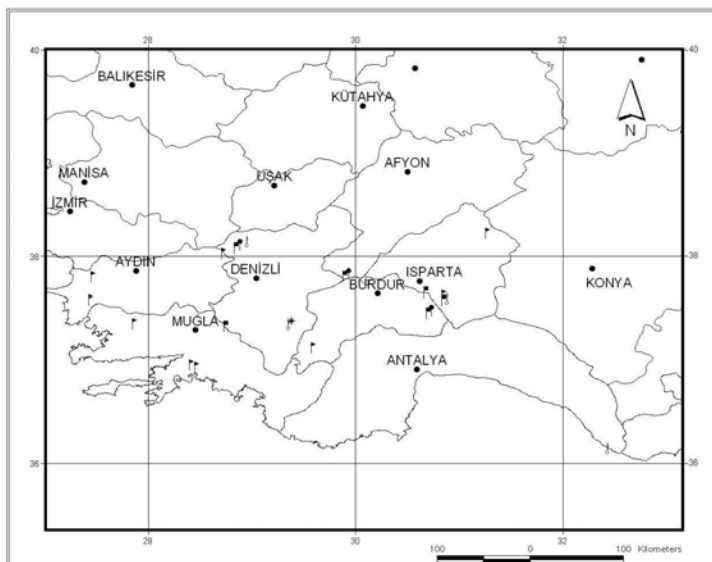


Figure 6. Distribution map of records in the research area; *Andricus infectorius* (♂), *Andricus kollari* (♀), *Andricus lignicolus* (♂), *Andricus lucidus* (♂), *Andricus polycerus* (♂)

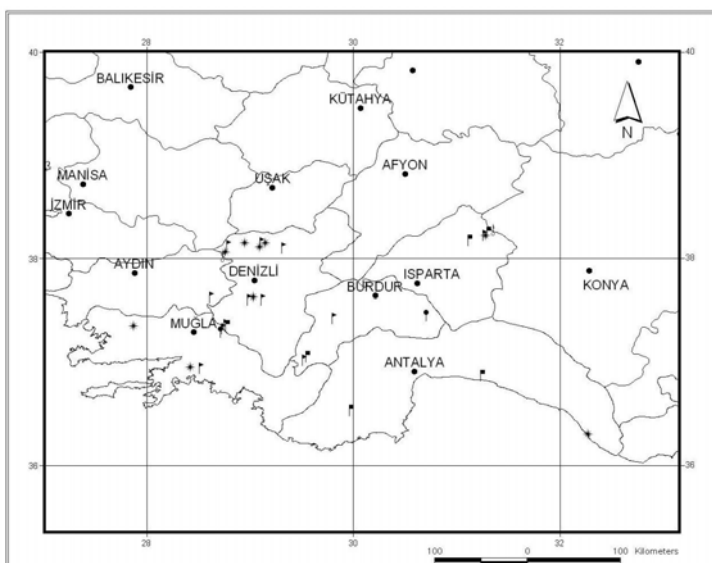


Figure 7. Distribution map of records in the research area; *Andricus quercustozae* (♂), *Andricus seckendorfi* (♀), *Andricus solitarius* (♂), *Andricus stefanii* (♂), *Andricus tomentosus* (♂)

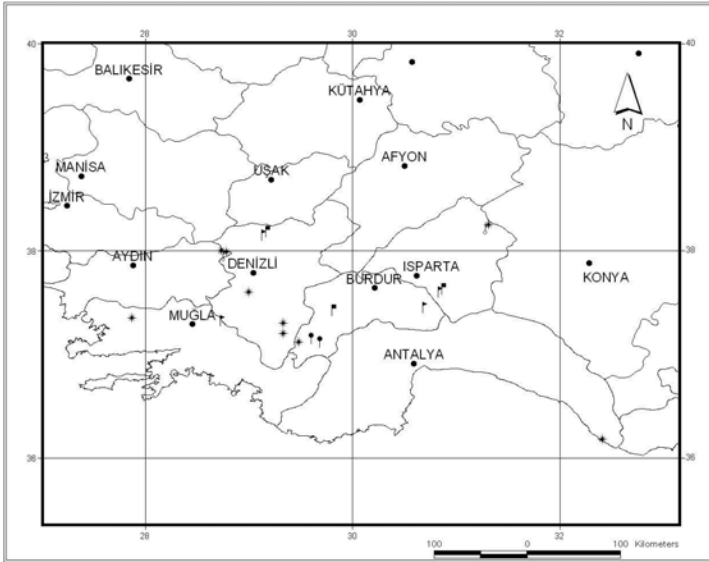


Figure 8. Distribution map of records in the research area; *Aphelonyx cerricola* ( $\blacktriangle$ ), *Biorhiza pallida* ( $\blacksquare$ ), *Cynips agama* ( $\blacktriangle$ ), *Cynips quercus* ( $\circ$ ), *Cynips quercusfolii* ( $*$ )

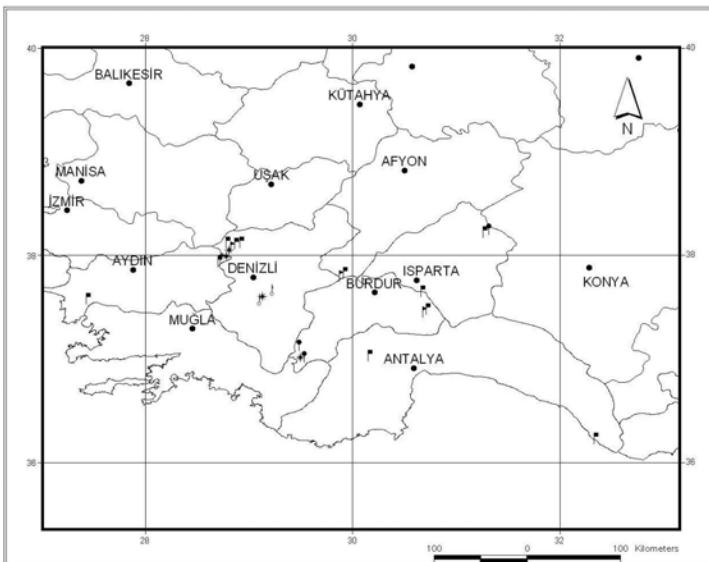


Figure 9. Distribution map of records in the research area; *Neuroterus lanuginosus* ( $\blacktriangle$ ), *Neuroterus minutulus* ( $\blacksquare$ ), *Neuroterus quercusbaccarum* ( $\blacktriangle$ ), *Plagiotrochus quercusilicis* ( $\circ$ ), *Pseudoneuroterus macropterus* ( $*$ )

