

# **FIRST RECORD OF *Podagrion pachymerum* ( Walker , 1833 ) (HYMENOPTER: TORYMIDAE) IN IRAQ**

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## **SUMMARY**

The present study was carried out in different region in Basrah province in southern in Iraq from January to December in 2021. The genus *Podagrion* (HYMENOPTERA: TORYMIDAE), is recorded for the first time in Iraq .

## **Introduction**

In superfamily Chalcidoidea , the family Torymidae contains more than 980 described species (Noyes, 2012) and with many hosts is considered as the biggest and most important groups in the biological control and morphological perspective.

The Torymidae wasps are recognized by attractive metallic coloured species with enlarged hind femur and generally long ovipositors. They are also recognized as one of the few groups of Chalcidoidea in which the cerci are visible ( Noyes , 2002 )

The subfamily Toryminae includes 55 genera , it contain many entomophagous species, generally on gall -forming Diptera and Hymenoptera (Grissell 1995).

The genus *Podagrion* was published by Spinola in (1811) depending on the species *Podagrion splendens* Spinola. Later many authors redescribed or treated it under various synonyms .

This genus distribute widely in the world with 101 described species (Noyes , 2001 ) , most of which occurs in tropical and subtropical region ( Goulet and Huber ,1993) . In respect of life history *Podagrion* , as well as the rest of the subfamily Podagrioninae , composes the homogeneous group

Adult wasps were diagnosed from other wasps in other families by their long ovipositor ,very short stigma veins , slightly raised cercal plates , and transverse petiole (noyes 2001)

*Podagrion* is close to genus *Palmon* Dalman ( Grissell & Goodpasture , 1981 ) , but can be distinguished by the following charcters : Podagrion with anellus transeverse , metasternum with one metasternal carina between metacoxae , Palmon with anellus cylindrical and longer than width metasternum with two metasternal carinae ( Grissell ;1995 ) .

In Iraq there are many studies and research in insects classification (Amed &Kareem ; 2000 . Al-Edani & Kareem ; 2015 ) but Unfortunatly , The torymid fauna has not studies comprehensevely , so that only two parasitoids species namely *Monodontomerus obscurus* and *Adontomerus amygdali* are recorded by abdul Rassoul & Mahmmoud ( 2017 a) and abdul Rassoul & Mahmmoud ( 2017 b )

## Materials and Methods

Specimens of *Podagrion pachymerum* were collected by sweeping nets from differen region in Basrah province in southern in Iraq from January to Desember in 2021 ( Table 1 ) . Specimens were preserved in 70 % eyhanol and deposited in the Museum of Natural History , Baghdad University . The specimens were studies and photographed using a Nikon camera installed on EZ4 binocular stereomicroscope , using the identification the keys of Narendran (1994) . All measurements were given in millimeters.

Table (1) : Collection sites

Location	Coordinates	Month	No. specimens
Nashua	30 <sup>0</sup> 49 <sup>^</sup> 16 . 85 <sup>''</sup> N , 47 <sup>0</sup> 35 <sup>^</sup> 47.06 <sup>''</sup> E	March	3
Hartha 1	30 <sup>0</sup> 36 <sup>^</sup> 23 . 9 <sup>''</sup> N , 47 <sup>0</sup> 43 <sup>^</sup> 00. 36 <sup>''</sup> E	April	3
Hartha 2	30 <sup>0</sup> 36 <sup>^</sup> 36 . 54 <sup>''</sup> N , 47 <sup>0</sup> 43 <sup>^</sup> 10. 34 <sup>''</sup> E	April	2

## Description

Body : ( Fig 1 a ) Total Length = 3.16 mm (excluding ovipositor sheath).  
Ovipositor length = 3.45 mm ; ovipositor sheath black to brown is Longer than body . Body metallic greenish color except eyes are red ; ocelli are pale reflecting black ( Plate 1 ) ; `Colour of Head & Mesosoma: Dark green With metallic refringence. head length in anterior view = 0.644 ; Width = 0.73 , length in lateral view = 0.7 ; width = 0.5 , POL = 0.38 , OOL = 0.92 , occipital carina reaching down temple margin.

Antenna : (Fig 1 b ) total length = 1.2 , it is inserted a little above lower ocular line ; antennal segment ; scape always reaching anterior ocellus, not reaching level of vertex , Pedicel: Shorter than F1 , scape pale yellow = 0.345 ; pedicel pale yellowish brown = 0.115 ; anellus = 0.023 ; funicle ( F1 –F 7 ) pale yellowish brown = 0.09 ; clava black = 0.345, (Plate 2); Clava is Longer than 3 preceding rest segments but not longer than 4 preceding segments combined .

Median carina of Propodeum is Inverted "V" shaped (Fig 1 c )

Legs : Fore and mid leg yellow , hind legs (Fig 1 d) black except bases of coxae and femur are yellowish brown ; hind coxa shorter than hind femur = 0.6 ; hind femur = 1.02 ; there are seven teeth on ventral margin of hind femur ; hind tibia pale yellowish brown = 0.9 ; tarsi yellow ; ; ventral margin with 7 teeth, second, fifth and seventh longer than remaining teeth, second largest (Fig 4) .

Wings : ( Forewing length = 2.22 ; width = 0.8 , x 2.77 as long as broad; relative length of SMV = 0.7 ; MV = 0.41 ; Length of MV: As long as 4x or longer than PMV PMV = 0.138 ; SV = 0.069 . Metasoma metallic green ; Excluding ovipositor sheath = 1.62 , gaster metallic green = 1.62 .

Male: Unknown.

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## Discussion

The genus *Podagrion* SPINOL, 1811 distributed all over the world, includes 101 species in the world fauna. 37 species present in Oriental region, 25 species in India, 17 species have been recorded in China and two species in Europe (Wisniewski, 1992; Narendran & Sheela, 2013). None of them was recorded from Iraq. The specimens in this study were collected from alfalfa *Medicago sativa* field but it was not found on other plants such as tomatoes, eggplant and okra. *Podagrion pachymerum* is known as a parasite of praying mantid ootheca (BOLU, AND ÖZASLAN, 2015).

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. The genus *Podagrion* is represented by six species in the West Palaearctic (Delvare, 2005). The genus *Podagrion* was previously unrecorded from Malta. *Podagrion* wasps are associated with the oothecae of various mantids in which they are parasitoids. Oothecae belonging to *Mantis religiosa* (Linnaeus, 1758), proved to be parasitised by *Podagrion splendens*, representing a new record for Malta

*Podagrion splendens* (Spinola, 1811) (Hymenoptera, Chalcidoidea) – a new record of Torymidae from Malta Thomas CASSAR1