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Short Communication

A Hymenopterous Parasite Affecting the Gall Midge, *Schizomyia* sp. (Diptera, Cecidomyidae) Infestation on *Acacia origena* in Assir Region of Saudi Arabia

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Abstract. A platygasterid hymenopterous parasite, *Amblyaspis* sp. was found attacking the gall midge, *Schizomyia* sp. (Cecidomyidae, Diptera) observed in galls collected from small branches of *Acacia origena* trees in Assir region.

Introduction

The *Acacia origena* = A. negrii = *A. menachensis* is a medium sized tree about 6m. high, branchy, flaky, with a whitish-grey stem. It has spines of medium size, 2-3cm. long, whitish in color, two to six pairs or more of pinnate leaves and approximately 6mm. glabrous leaflets with 14-16 pairs per pinna.

This tree grows predominantly on the upper areas of the Assir scarpy mountains in Saudi Arabia approximately 2000 m. above sea level, where it receives about 300-500mm. of rainfall annually. The mean temperature is 16°C and the relative humidity is about 40-86%. It is an economic tree which traditionally has been used by rural people in a variety of purposes including housing and wood works, in addition to modern esthetic values concerning recreation, greenery, bird refuges etc.

The gall-making phenomenon is being scattered throughout several orders of insects, but the order Diptera includes the largest number of gall-making insects. Felt [1] listed 701 species of gall-making insects of which, 682 belong to the family Cecidomyidae which attack a varied spectrum of plants. Other workers reported

galls on different host plants [2-4]. All types of galls by virtue of their nature and formation are considered dwelling places in which larvae of these insects feed.

The mechanism by which gall insects invade plant tissue was suggested by Frost [5,p. 526] that no distortion of plant tissue occurred at first but the gall grows with the insect larvae that feed primarily on the abundant food produced by the gall where an enzyme produced by the insect changes the starch of plant cells into sugars. He further stated that the production of excess food material then stimulates growth of protoplasm that causes cell to multiply and the gall would be formed on meristematic tissues.

Small branches and terminals containing galls were collected from trees *A. origena* in Assir region, where an incidence of plant pathogens were first incriminated as casual organisms. The galls (Fig. 1) were dissected to reveal the presence of dipterous larvae occupying small chambers within the tissues of each gall. Furthermore, some galls were kept in plastic bags and left under room temperature for two days after which numerous hymenopterous wasps (parasites) together with mature individuals of the adult midge were recovered. Both were identified by the Commonwealth Institute of Entomology (CIE) as the gall midge *Schizomyia* sp. (Diptera, Cecidomyidae) (Fig. 2) and its parasite *Amblyaspis* sp. (Hymenoptera, Platygasteridae) (Fig. 3).

Fig. 1. A number of galls at the terminal end of a branch.
Notice: circular exit holes used by adult midges during emergence.

Fig. 2.Female of *Schizomyia* sp.

Fig. 3.The hymenopterous parasite *Amblyaspis* sp.

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طفيـل من غشائية الأجنحة يؤثر على إصابة صانعة الأورام شيزومايا (ثنائية الأجنحة : سيسودومايدي) على أشجار السنط في منطقة عسير

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ملخص البحث. شوهـد مظهر الإصابة في شكل أورام على أغصان أشجار السنط ونمواتها الطرفية في الغابات الطبيعية في منطقة عسير. ولقد تم جمع عدد من هذه الأغصان المصابة وتشريح بعض الأورام حيث وجدت داخلها يرقات تتبع رتبة ثنائية الأجنحة تشغل فراغات صغيرة وسط الأنسجة النباتية. ولقد تم حفظ بعض هذه الأورام النباتية في أكياس بلاستيك محكمة الغلق حيث وضعت تحت ظروف الحرارة الـطبيعية للحجرة وبعد يومين ظهر داخل الأكياس البلاستيكية عدة أفراد من حشرات صغيرة من رتبة غشـائية الأجنحة ومعها الحشرات الكاملة من صانعة الأورام النباتية. وقد تم تصنيف وتسمية النوعين بوساطة المتحف البريطاني بالمملكة المتحدة وهي عبارة عن صانعة الأورام من الجنس شيزومايا من رتبة ثنائية الأجنحة والطفيل أمبلي أسبس من رتبة غشائية الأجنحة.