

Abundance of some Myiasis cause flies in the Marshes of Basrah, Southern IRAQ

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ABSTRACT

Studying was carried out over one year from 5/9/2007 – 25/8/2008, to static the flies that causes maysis abundance in some marshes of southern IRAQ. Results showed that there are more than ten species, belong to 7 genera and 3 families, were distributed all around the marshes, namely: *Chrysomya albiceps*, *C. megacephala*, *Calliphora vomitoria*, *Ca.vicina*, *Ca. terrae-novae*, *Ca. livida*, *Lucilia caeser*, *L.sericata*, *L. cuprina*, *Cordylobia anthropophaga*, *Wohlfahrtia vigils*, *sarcophaga haemorrhoidalis*, *Musca domestica*, *Fannia canicularis*. Description of all species, illustrated diagrams drawing by Lucida camera, were provided.

Keyword: *Myiasis flies, Taxonomical, marshes of Basrah*

1. Introduction

Iraqi Ahwars considered as One of the largest water ecosystem in the middle east, it is about 2000 squares kilometers of land, its population about 500000 peoples, where been benefit from its resources such as fishes, birds, water buffalos, wild aquatic plants (reed, calloil and sedage), also cultivated plants such as rice, maize and date palm) (Al-Mayah *et al.* 2014). Screwworms are fly larvae (maggots) that feed on living flesh. These parasites infest all mammals and, rarely, birds. Two different species of flies cause screwworm myiasis Screwworms can enter wounds as small as a tick bite Left untreated, infestations can be fatal (Zamput, 1965), these insects may attacks dog, wolf or any wild animals (Alhilaify, 2008).

For this reason ,studying myiasis study in different parts of the world, e.g. in Iran (Talori et al. 2004), in india (Bapat, 2000) in China (Jiang, 2002) , in Australia (Spradbery, 1981). Here in Iraq many works have been done (Abdul-Rassoul *et al.* 1996; Alhadalg & Aziz 2005; Abul-Hab, 2000 and Al-halify, 2008).

Such environment is quite suitable for many parasitic insects, where a lot of domestic animals, dogs, wolf that feeding on the blood of domestics animals own by the population of Al-Ahwar, many of these insects are causing myiasis , and that of course , get a dangerous for both human and animals.

Because of no such study has been done before, an integrated work has been started on that marshes to record the insects that may cause Myiasis , present paper including the first part, which include the family callophoridae.

2. Material and methods

Collection of the adults insects was carried out over one year from 5/9/2007 – 25/8/2008, at two marshes of Basrah province, these are:

- Al-Qurana marshes, including , alshahin, al-sharsh, bany Monsour and al-saad marsh.
- Al-Huzia marshes

Collection was done every week, by preparing pheromone traps provided by the veterinary hospital together with the pheromone , these traps left for 24 hours, then after which specimens were lifted carefully from the adhesive material that the trap contain , then kept in a big envelops, and brought to the laboratory.

In the laboratory, specimens were preliminary classified to the family, and to the genus if that possible, by quick exam under binuclear microscope, then kept in refrigerator under cool temperature, deep classification was done from time to time depend on the time available. All species were illustrated by drawing the important parts of the body using Lucida camera. Identification was done following many keys e.g Spradbery (1980), Zamput (1965).

3. Results and Discussion

Seven species belong to three genera of the family calliphoridae, were recorded from marshes of basrah, these are:

1. Genus: Chrysomya
 - i. *C. albiceps*
 - ii. *C. megacephala*
2. Genus: Calliphora
 - i. *Ca. vomitoria*
 - ii. *Ca. vicina*
 - iii. *Ca. terrae-novae*
 - iv. *Ca. livida*

3. Genus: *Lucilia*

- i. *L. cuprina*
- ii. *L. sericata*
- iii. *L. caeser*

Here is below an a short description for each of these species

3.1 Genus: *Chrysomya*

Adults with bright metallic blue or green, 5-12 mm length, antenna with plumose arista, dorsal side of prothorax with two black bands, base of the wing with dense ling hairs, dorsal side of the posterior end of the abdomen with narrow black bands.

3.1.1 *Chrysomya albiceps*:

Adult with shine green – green bluish colour, 5-10 mm length, 2.9-3.7 mm width. Head round, compound eyes oval, with red colour, Thorax with. Spiracle white or faint in colour, 2 spines in its broad end. Wing scale white , with yellow hairs on its dorsal end, legs either red or black. Abdomen with black strips on the dorsal of its segments.

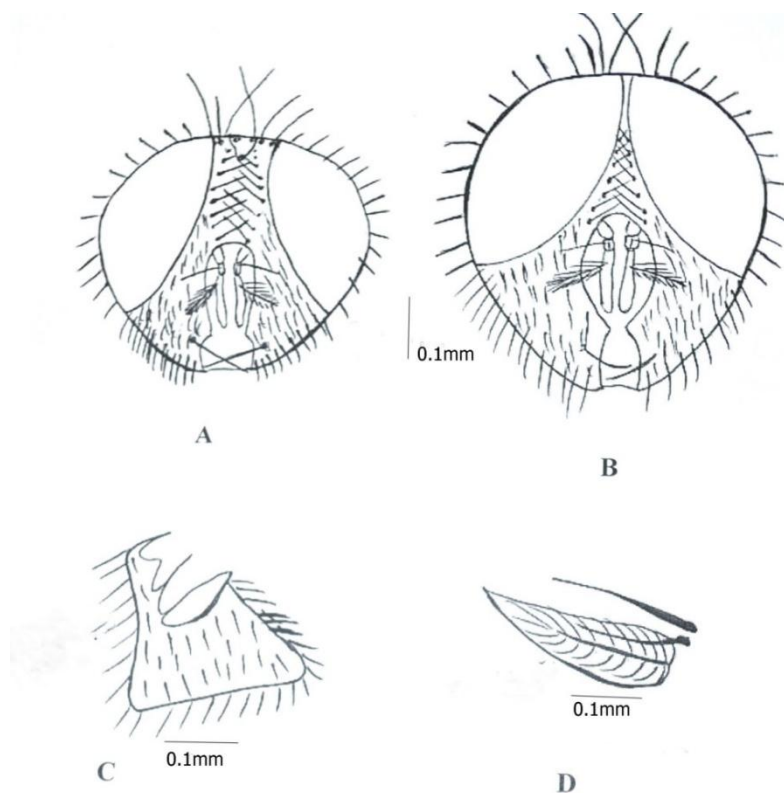


Fig. 1. *Chrysomya albiceps*: A: Anterior view of female head capsual; B: Anterior view of male head capsual.; C: wing scale; D: thoracic spiracle.

3.1.2 *Ch. megacephala*

Adults with shiny greenish or bluish colour, head round, eyes pink or red. Thorax without, spiracle black or brown, with single spine at its broad end. Legs black or brown. Wing scale brown, with black hair. In Abdomen, 2nd and 3rd segments with black band.

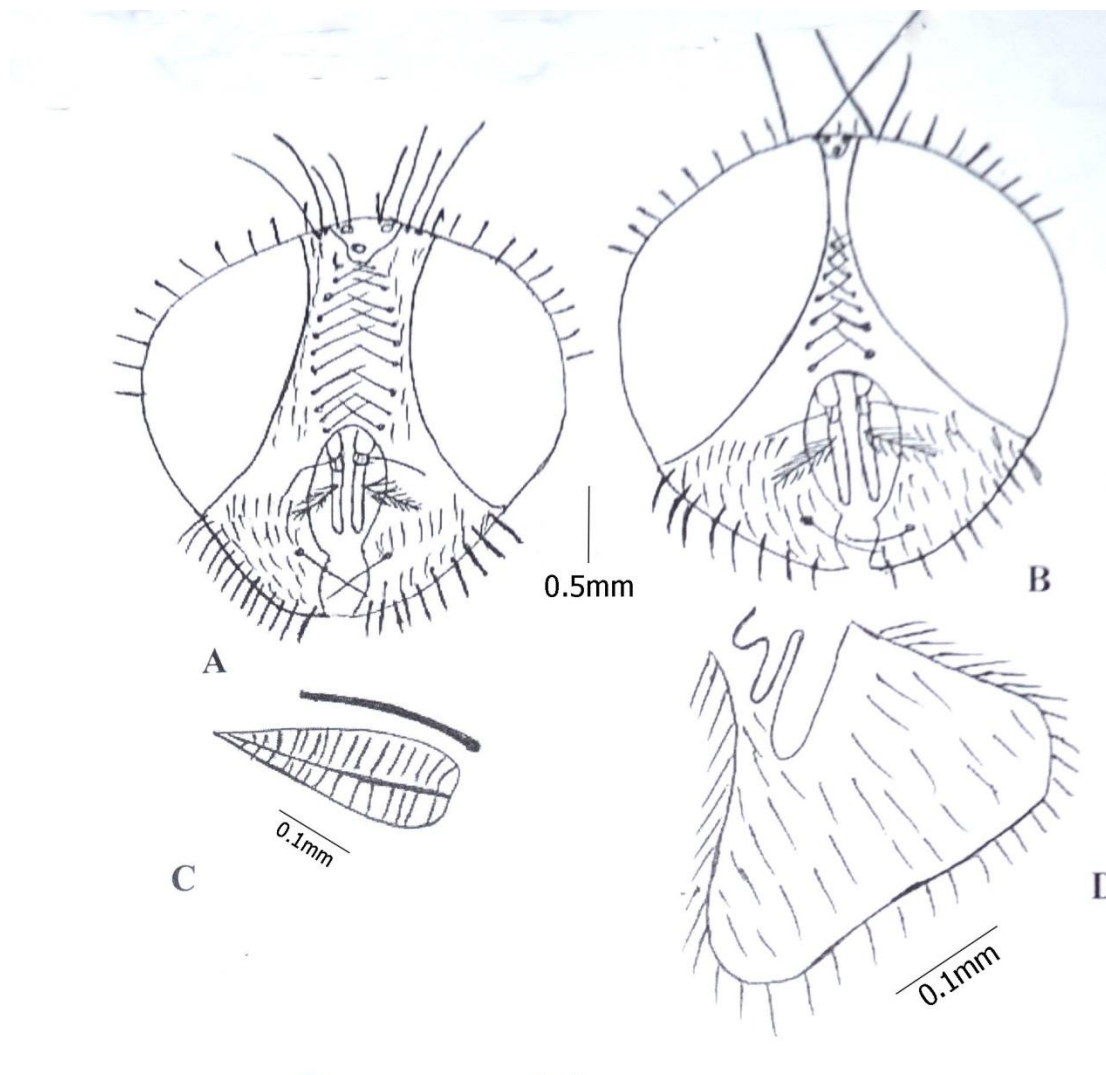


Fig. 2. *Chrysomya megacephala*: A: Anterior view of female head capsule; B: Anterior view of male head capsule; C: thoracic spiracle; D: wing scale.

3.2 Genus: *Calliphora*:

Adults bright metallic blue, 5-14 mm length, arista of antenna plumose, thorax without bands, abdomen with more long hairs than thorax, base of wing with dense long hairs, abdomen with short hairs.

3.2.1 *C. vomitoria*

Bluish insects with red cheek, gena black covered with red hairs on dorsal and ventral sides. Thorax bright metallic blue, without..., base of the wing black. Leg black. Abdomen bright green, with hairs at its end.

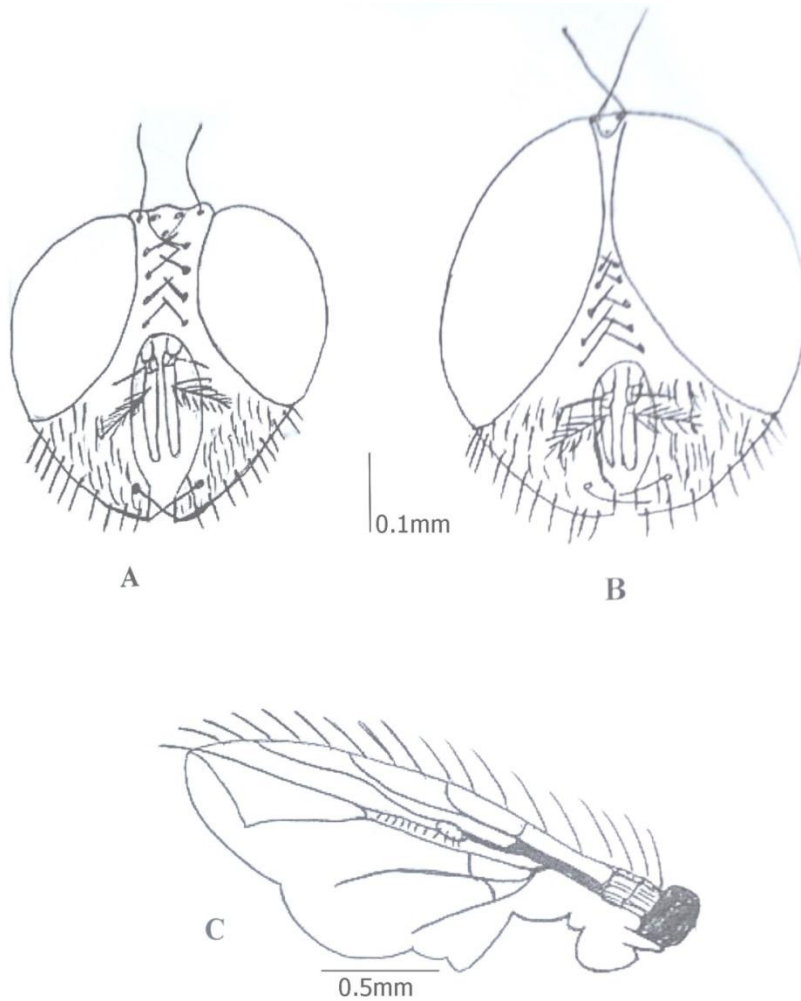


Fig. 3. *Calliphora vomitoria*: A: Anterior view of female head capsule; B: Anterior view of male head capsule; C: wing; *C. vicina*.

3.2.2 *C. vicina*

Body strong, deep blue to black in colour, Head with bright orange cheeks, gena with black hairs. Thorax black-gray, its dorsal side with dense brown hairs, wing base yellow or pink, legs brown to black. Abdomen bright blue to black with shiny silver hairs *at* its end.

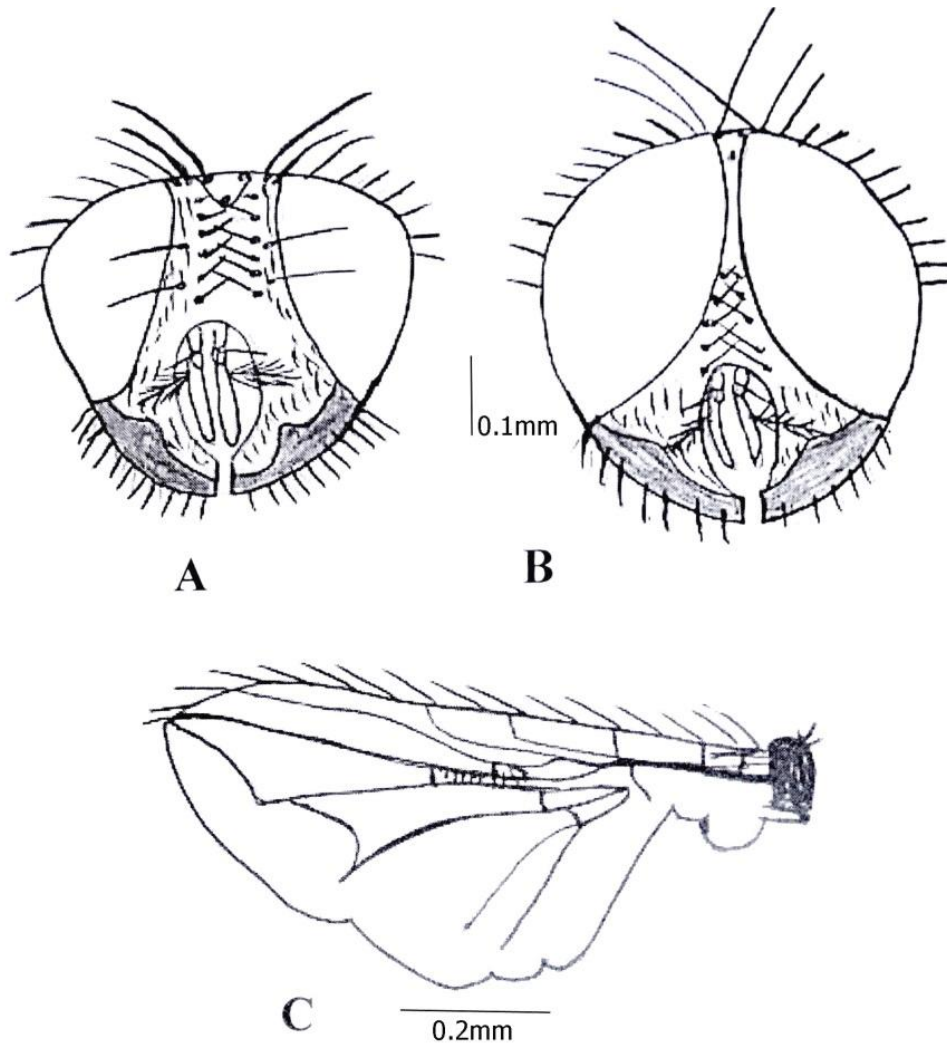


Fig. 4. *Calliphora vicina*: A: Anterior view of female head capsual; B: Anterior view of male head capsual; C: wing

3.2.3 *C. terrae-novae*

Bluish green , gena black, face with black hairs, thorax green or greenish blue, with hairs, wing base black, legs black. Abdomen bright green, with erect hairs at its end.

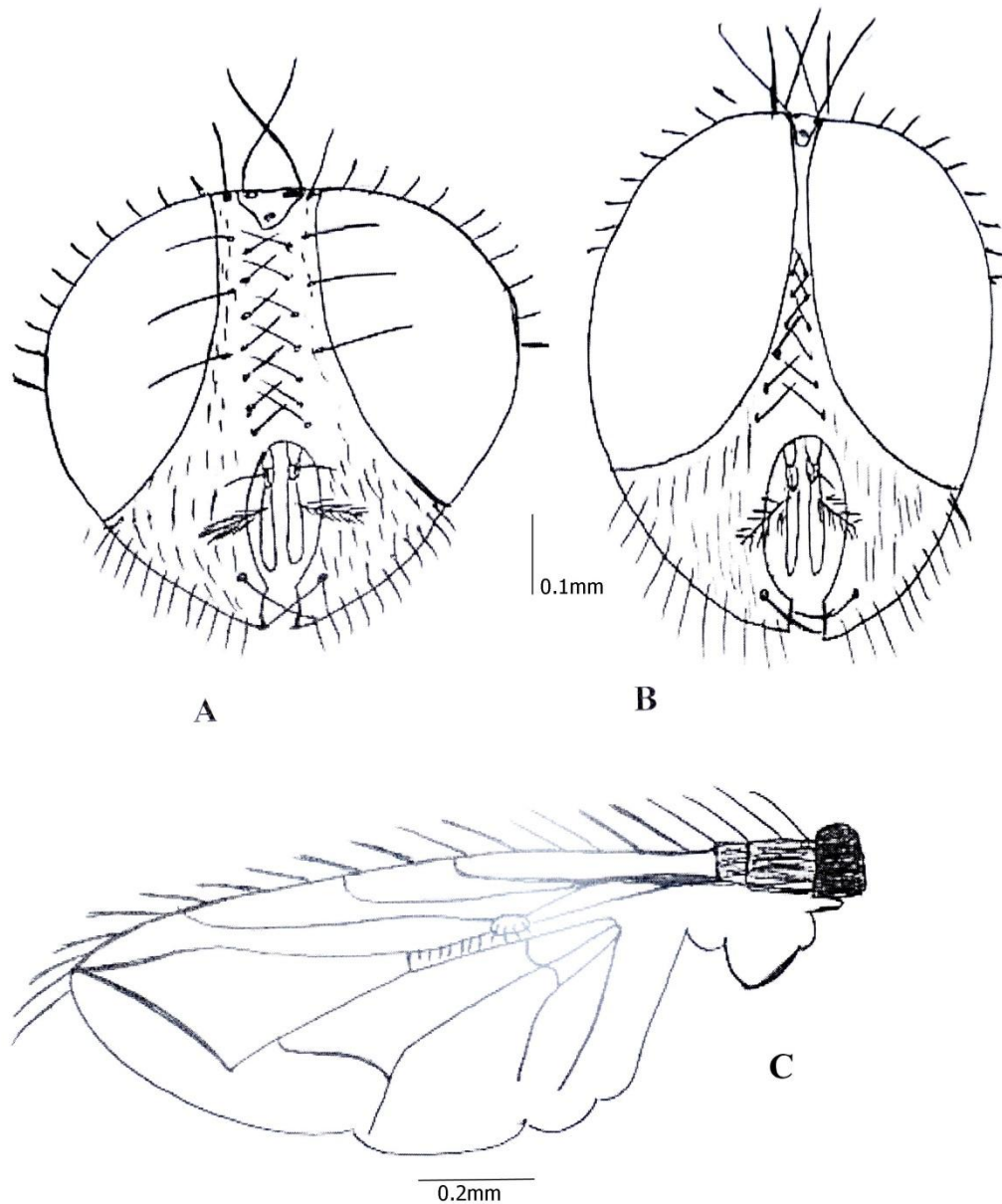


Fig. 5. *Calliphora terrae-novae*: A: Anterior view of female head capsual; B: Anterior view of male head capsual; C: wing.

3.2.4 *C. livida*

Greenish blue, 8-11 mm length, gena of the head covered with black hairs, Thorax green or bluish with dense hairs, base of the wing yellow, legs black. Abdomen shiny greenish bluish.

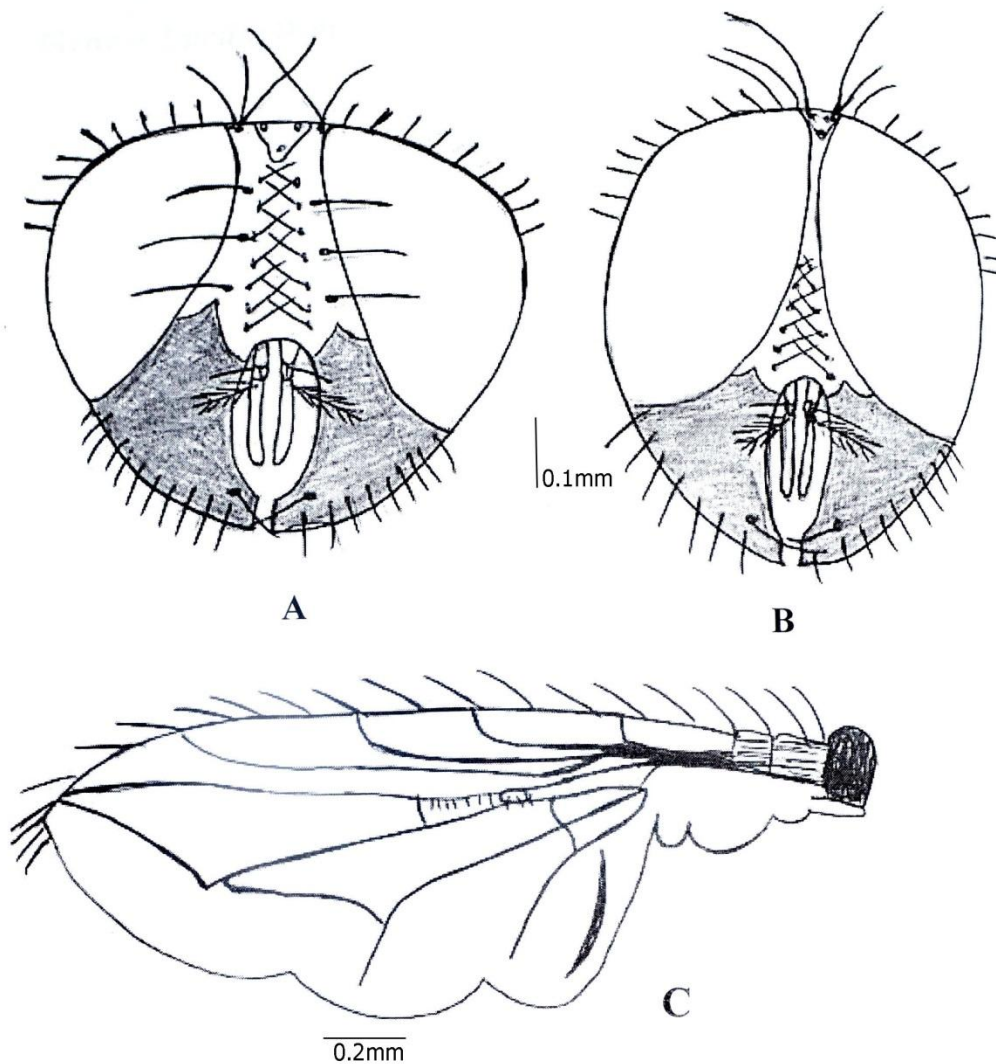


Fig. 6. *Calliphora lividae*: A: Anterior view of female head capsual;B: Anterior view of male head capsual;C: wing.

3.3 Genus: *Lucila*

Body with bright metallic green-bluish. 5-13 mm length. Arista plumose, thorax without bands, scale of wing without hairs. Abdomen with green or greenish blue or even matalic blue.

3.3.1 *L.cuprina*

Adults bright green or blue, 5-10 mm length, head round, compound eyes red-brown, 1-6-2.1 mm length, 1.1-1.3 mm width, surrounding with short silver hairs, thorax green with long spine, femur and tibia with hairs, wing base yellow. Abdomen bright green to greenish blue, posterior end of segments 1&2 without spine.

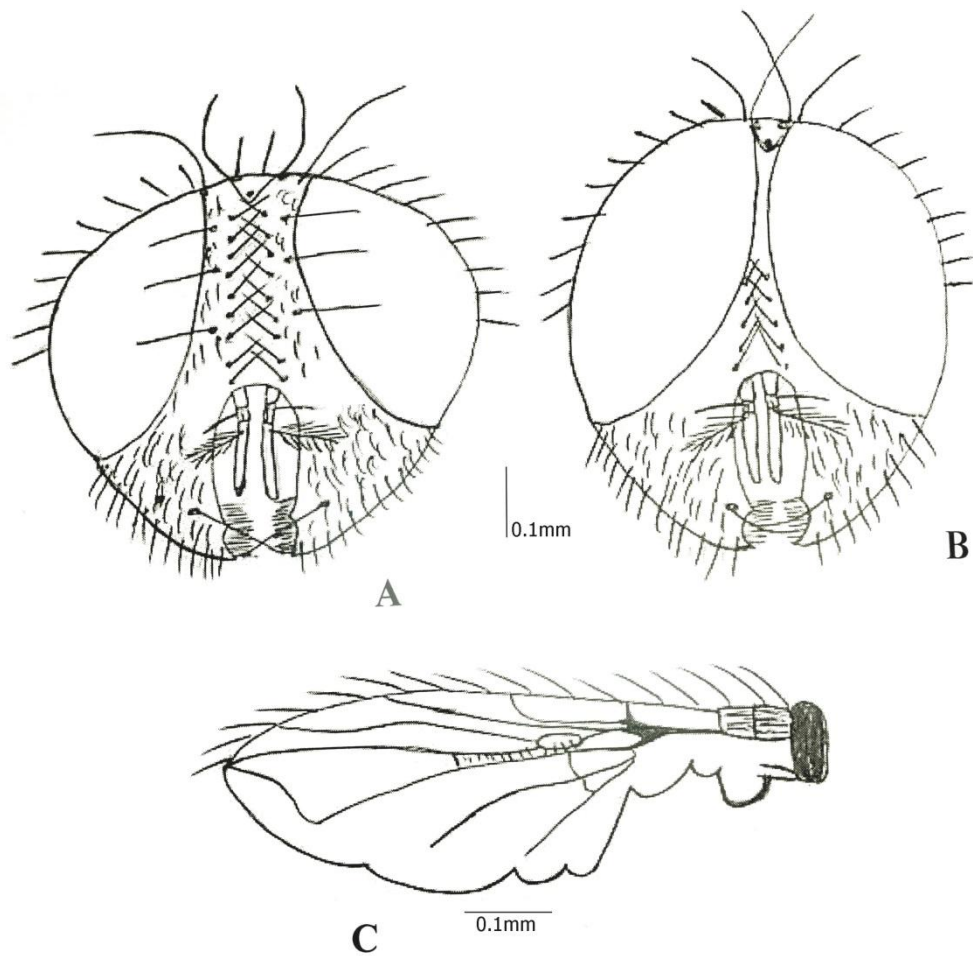


Fig. 7. *Lucilia cuprina*: A: Anterior view of female head capsual; B: Anterior view of male head capsual; C: wing.

3.3.2 *L. sericata*

It is look like *L.cuprina*, head round, brown, vertex with long spine like hairs (10-11 mm), post vertex spine short, straight, cheek without hairs. Thorax green or green blue in colour, with long spine like hairs, wing base yellow, scale of wing. legs black or brown. Abdomen bright green or greenish blue, posterior margin of the tergum of 1&2 segments without spine, but with long hairs.

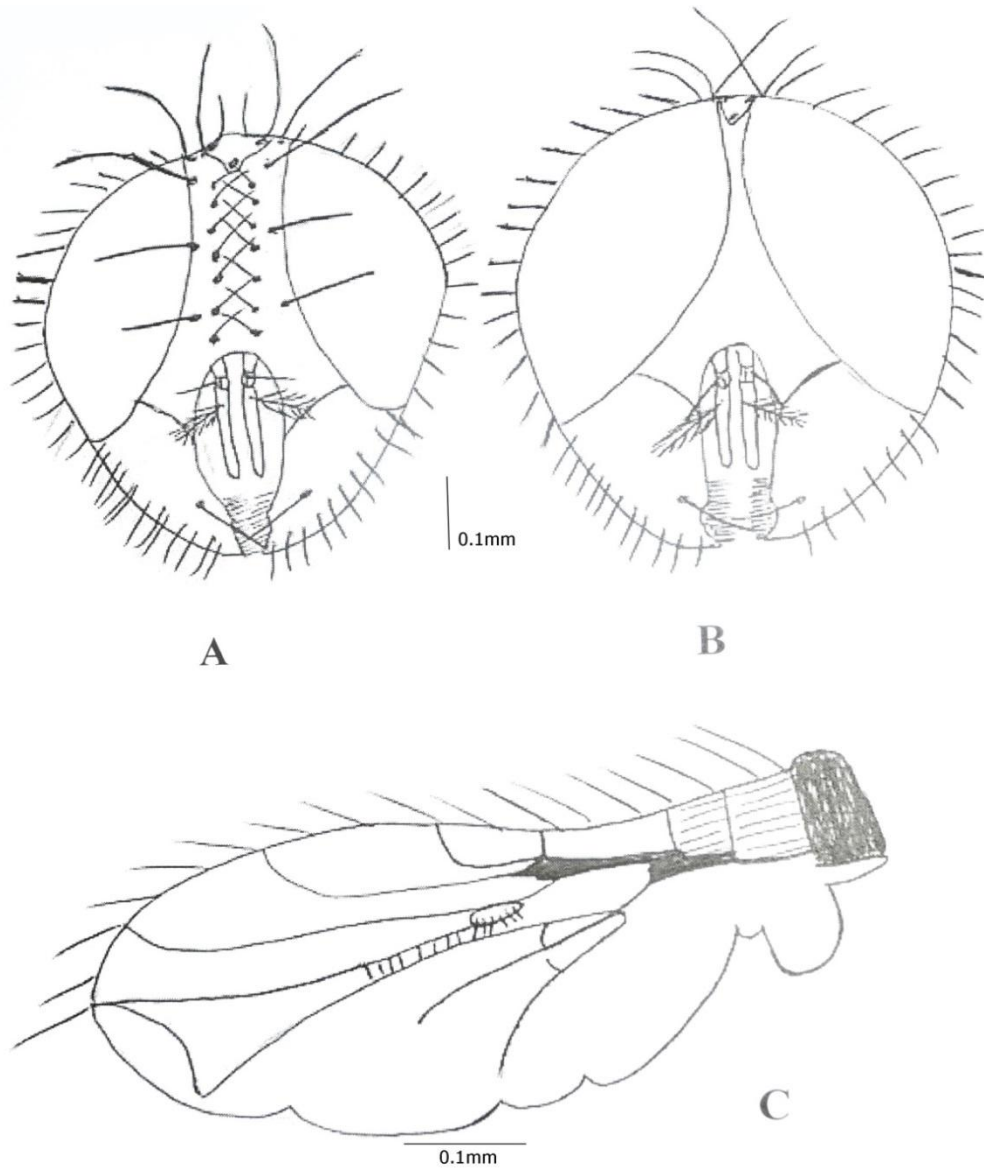


Fig. 8. *Lucilia sericata*: A: Anterior view of female head capsual; B: Anterior view of male head capsual; C: wing.

3.3.3 *L.caeser*

Bright green or blue, 6-11 mm length, vertex bright black or black greenish, ocelli big, thorax bright greenish blue, with strong spine like hairs on the dorsal side, wing base black or brown, wing scale without hairs, abdomen without long hairs on the 3rd segment.

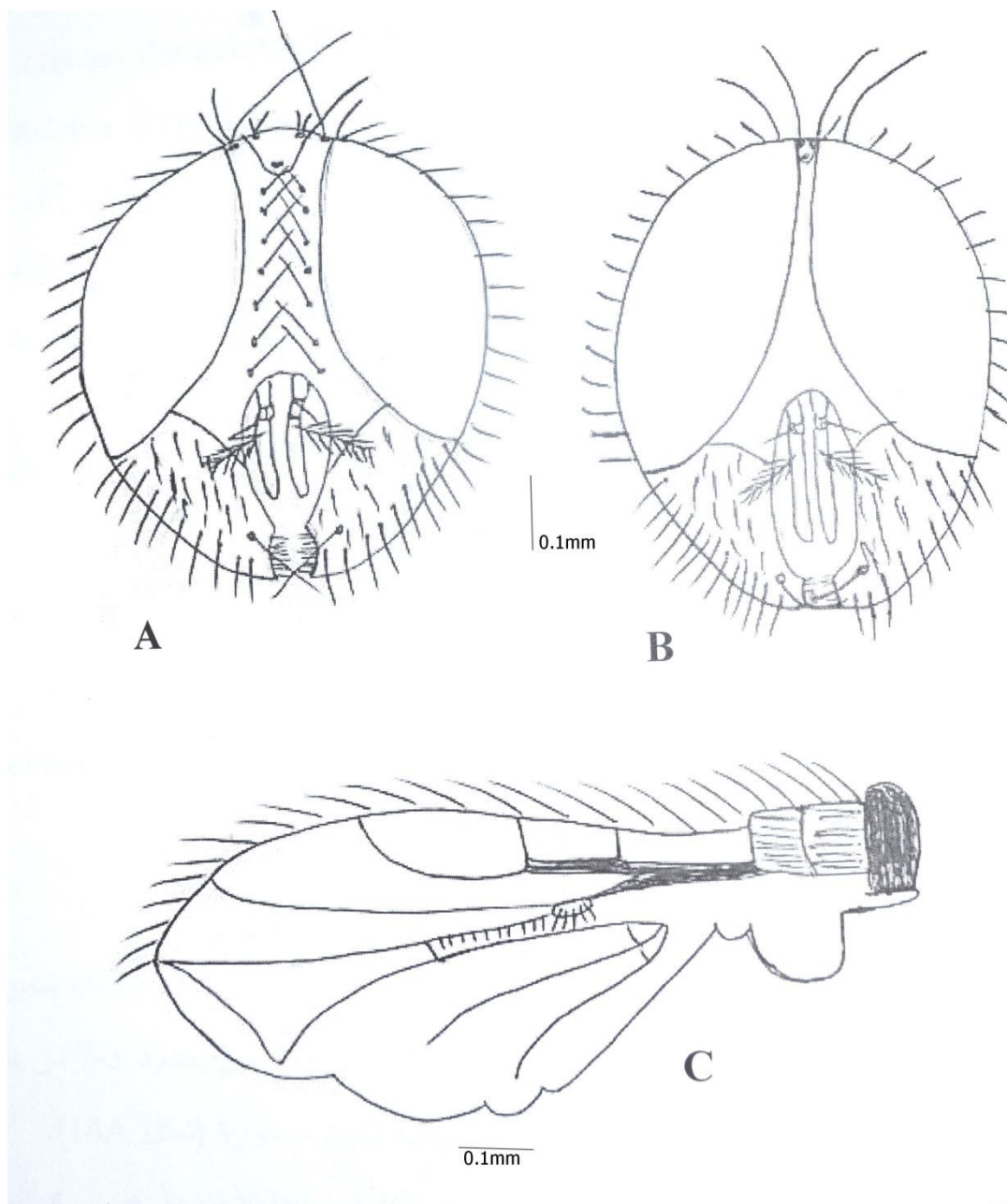


Fig. 9. *Lucilia caesar*: A: Anterior view of female head capsule; B: Anterior view of male head capsule; C: wing.

Though many flies causes myiasis were recorded from marshes of Basrah/ Iraq this paper discussed only the family Calliphoridae, because is the most common family, as well as it is a facultative family attack both dead and live animals, some could be feed on flower. Different between the number of species of each of the three genera, is quite obvious as Calliphora recorded the highest, this could depending on the method they attack the host, as

well as the animals available could be prefer species than other, *Calliphora* is the most common genus, and it is responsible for myiasis in human and animals.

Though the number of species for each genus is not wide different, as 2 for *Chrysomya*, 4 for *Calliphora* and 3 for *Lucilia*, ecological study show the number of *Calliphora* is quite higher than other genera, and from here the importance of the genus comes.

References

Abdul-Rassoul, M.S.; Ali, H.A. and Jasim, F.A. (1996). Note on the *Chrysomya bezziana* vill (Diptera, callophoridae), first record from Iraq. Bull. Iraq Nat.His.Mus.

Abul-Hab, J.K.(2000). True nad psudointestinal human myiasis. J.Comm. Med., 13(2):123-124.

Bapat, S.S. (2000). Neonatal myiasis, pediatrics, 106 (1):6

Al-Helfi, M.A.A. (2008). *Chrysomya bezziana* in dogs threat Basrah province south of Iraq. Bas. J. Vet. Res., vol. 7, (1).

Al-Hadlag, K.S. and Aziz, M.A. (2005). True intestinal myiasis with house fly in human in Basrah provience, with mention to its treatment. Bas. J.Vet. Res. Vol. 4 (1), 78-80. (in Arabic, with English abstract).

Al-Mayah, A.A.; Al-Hilli, M.R. and Hassan, F.M. (2014). Marshes flora of southern Iraq. Al-Basaer C. (2000). A collection analysis on 54 cases of human myiasis in China from 1995-2001. Chin. . J. Engl. 115(10): 1445-1447.

Spradbery, J.P. (1981). A new trap design fro screw-worm fly studies. J. Aust. Ent. Soc., 20: 151-153.

Talar, S.A.; Sadr, F. and Doroodger, A. (20014). Wound myiasis cuased y *Lucila sericata*. Archives of Iranian medicine, 7 (2):128-129.

Zumpt, F. (1965). Myiasis in man and animals in the old world. A text book for physicians, veteraniars and Zoologists. But. Co. London. 267.