

# **ARGIOPE BILALI, A NEW SPECIES OF (ARANEIDAE, ARACHNIDA) BUGS FORM DISTRICT DADU, SINDH**

(SHORT COMMUNICATION)

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**ABSTRACT:** *Argiope bilali*, a new specie of spiders was described from Dadu, Sindh, Pakistan.

**KEY WORDS:** New species, spider, Araneidae, *Argiope*. Dadu, Sindh.

## INTRODUCTION

The *Argiope* spider somewhat large and amazing that often have a markedly coloured on the abdomen. These spiders are knowing know throughout the world. nearly everyone countries in tropical or temperate climates these species that are similar in appearance. It got its name from a Greek name means "silver-faced."

The spiders belongs to order Araneae are very robust and potent predators and they are also important biological control agents their predatory role towards insects and on other spiders, although a few large species also praying vertebrates. Coloration of *Argiope* is silvery white, and make a zigzag type of web. The taxonomic work on the spiders were studied by several authors, [1;2;3,4,5,6,7;8,9 10;11;12,13,14]; Unfortunately, such significant and useful natural biological control group has been neglected in Pakistan. Present knowledge of spiders fauna in Pakistan is highly restricted to the taxonomy.

In October 2013, the authors found a female specimen of the genus *Argiope* at rice field in Dadu. This species is clearly different from *Argiope trifasciata* and *argiope pardhani*. The authors are able to describe this new species and to make some valuable considerations about the new record.

## MATERIALS AND METHODS

The total number of 621 specimens were collected during the year 2013 and 2014 in the months of October to September from four taulkas: Khairpur Nathan Shah, Mehar, Johi and Dadu of district Dadu, Sindh, Pakistan. The new species was also caught among the above conducted survey and visit above selected areas. Further work was done using standard research methods.

***Argiope bilali* n.sp**

**DIAGNOSIS:** The species is closest to *A. trifasciata*. but somewhat differ on somebody patterns and on the basis of genitalia and line drawing discussed in n.sp.

### DESCRIPTION OF FEMALE HOLOTYPE:

Carapace covered by silvery scales on dark black brown back ground. Chelicerae dark brown and its anterior boss small. Posterior eye row (PE) is strongly procurved, posterior median eye (PME), anterior median eye (AME) large and anterior lateral eyes (ALE) a posterior lateral eye (PLE) small (Fig.1a,b). Labium and maxillae are dark brown, labium is wider than long, having distal pale yellow border line.

Sternum dark blackish brown with median wide yellowish bar which forks posteriorly into three wide spikes. Legs with dark brown bands with yellow light rings.

### ABDOMEN:

is wide as long, shield shaped with silvery scales and transverse thin black lines, sides of abdomen slightly lobed covered with slivery scales. Venter black with two semi-circle parallel pale line enclosing black area, broken posteriorly going around spinnerets on black area appear four silvery white hairy patches reflecting on black area. Epigynum noticeably hard, with wide median septum (MS), epigynum scape with two depressions on its each side (Fig.2 c,d). Spermatheca (SPT) is kidney shaped, epigynal orifices (EO) strongly diverging detail dorsal structure show in line drawing. (Fig. 3. e,f)

### MATERIAL EXAMINED

1♀, 12 XI-2013 Makhdoom Bilawal, (Asif Raza)

### ETYMOLOGY:

This new species name after locality.

### REPOSITORY:

The type material is deposited in the Advanced Entomology Laboratory, Department of Zoology, University of Sindh, Pakistan.

### MEASUREMENTS: 1♀ (mm)

PARAMETERS	HOLOTYPE (n=1)
Body Length	10
Carapace Length	4
Carapace Width	4.5
Abdomen Length	6
Abdomen Width	5

### MEASUREMENTS OF LEGS (mm)

Legs	I	II	III	IV
Femur	8	7	4	6
Patella + Tibia	9	8	6	7
Metatarsus	7	6	3	5
Tarsus	0.9	0.7	0.5	0.6
Total	24.9	21.7	13.5	18.6



Fig. 1. (a-b) dorsal, and ventral, view



Fig.2. (c-d) Eye pattern and epigynum

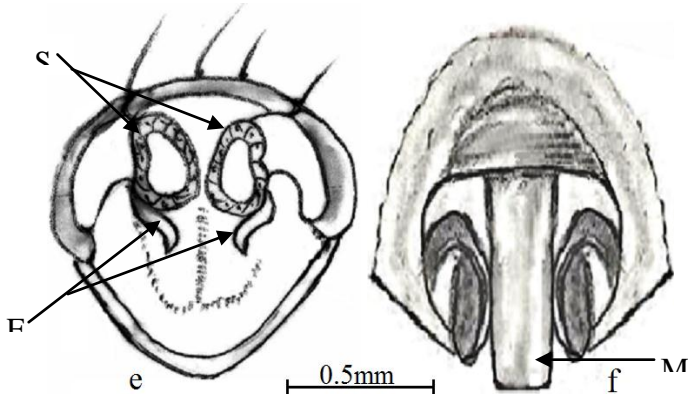


Fig.3. (e-f) Dorsal and f. Ventral view of epigynum

## REFERENCES

- [1] Marc, P., Canard, A. and Ysnel, F., Spiders (Araneae) useful for pest limitation and bioindication. *Agric. Ecosyst. Environ.*, **74**:229-273. (1999).N
- [2] Nyffeler, M. and Sunderland, D. K., Composition, abundance and pest control potential of spider communities in agro ecosystem. A comparison of European and U.S. studies. *Agric. Ecosyst. Environ.*, **95**:579-612. (2003).
- [3] Nyffeler, M., Sterling, W. L. and Dean, D. A., How spiders make a living. *Environ. Entomol.*, **23**:1357-1367.(1994a).
- [4] pearce, S. and Zaluckl, M. P., Do predators aggregate in response to pest density in agro ecosystem? Assessing within field spatial patterns. *J. Appl. Ecol.*, **43**:128-140. (2006).
- [5] Schmidt, H. M., Thies, C. and Tschardtke, T., Landscape context of arthropod biological control. Ecological engineering for pest management: advances in habitat manipulation for arthropods. (eds. G. M. Gurr, S. D. Wratten and M. A. Altier), *CSIRO Press, Collingwood*, pp. 55-63. (2004).
- [6] Schmidt, M. H. and Tschardtke, T., Landscape context of sheet web spider (Araneae: Linyphiidae) abundance in cereal fields. *J. Biogeogr.*, **32**:467-473. (2005a).
- [7] Schmidt, M. H., Roschewitz, I., Thies, C. and Tschardtke, T. Differential effect of landscape and management on diversity and density of ground dwelling farmland spiders. The role of perennial habitats for Central European farmland *J. Appl. Ecol.*, **42**:281-287.(2005).
- [8] Sunderland, K. D., Mechanisms underlying the effects of spiders on pest populations. *J. Arachnol.*, **27**:308-316. (1999).
- [9] Sunderland, K. and Samu, F., Effects of agricultural diversification on the abundance, distribution, and pest control potential of spiders: a review. *Entomol. Exp. Appl.*, **95**:1-13. (2000).
- [10] Riechert, S. E., The bows and whys of successful pest suppression by spiders: insights from case studies. *J. Arachnol.*, **27**:387-396. (1999).
- [11] Symondson, W. O. C., Sunderland, K. D. and Greenstone, M. H., Can generalist. Predators be effective biocontrol agents? *Ann. Rev. Entomol.*, **47**:561-594. (2002).
- [12] Riechert, S. E. and Harp, J., Nutritional ecology of spiders. In: *Nutritional Ecology of Insects, Mites, Spiders, and Related Invertebrates.* (eds. F. Slansky and J.G. Rodriguez), *John Wiley & Sons, New York*, pp. 645-672.(1987).
- [13] Riechert, S. E. and Lawrence, K., Test for predation effects of single versus multiple species of generalist predators: spiders and their insect prey. *Entomol. Exp. Appl.*, **84**:147-155.(1997).
- [14] Riechert, S. E. and Lockley, T., Spiders as biological control agents. *Ann. Rev. Entomol.*, **29**:299-320. (1984).