| Virus Name: Matariya | Abbreviation: MTYV |
|---|---|

Status
**Possible Arbovirus**

Select Agent
**No**

SALS Level
**2**

SALS Basis
**Results of SALS surveys and information from the Catalogue.**

Other Information

Antigenic Group
**Matariya**

## SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
**An 1477-61**

Accession Number

Original Date Submitted
11/7/1984

Family
**Bunyaviridae**

Genus
**Bunyavirus-like**

Information From
**J.R. Schmidt**

Address
**Department of the Navy, BUMED, Washington, D.C. 20372 USA**

Information Footnote
**Reviewed by editor**

## Section II - Original Source

Isolated By (name)
**J.R. Schmidt**

Isolated at Institute
**Cairo, Egypt**

Host Genus
**Sylvia curraca (Lesser whitethroat), southward migrant**

Species

Host Age/Stage
**Adult**

Sex
**Not Answered**

| Isolated From | Isolation Details |
|---|---|
| **Whole Blood** | **(heparin)** |

Signs and Symptoms of Illness
**None**

Arthropod

Time Held Alive before Inoculation

Collection Method
**Netted**

Collection Date
**10/8/1961**

Place Collected (Minimum of City, State, Country)
**West of Port Said, Port Said Gov., Egypt**

Latitude
**31° N**

Longitude
**32° E**

Macrohabitat
**Littoral of Egyptian delta**

Microhabitat

Method of Storage until Inoculated
**Not stored**

Footnotes

## Section III - Method of Isolation

Inoculation Date
**10/10/1961**

Animal (Details will be in Section 6)
**nb mice**

Route Inoculated
**Intracerebral**

Reisolation
**Yes**

Other Reasons

Homologous Antibody Formation by Source Animal
**Not tested**

Test(s) Used

Footnotes

## Section IV - Virus Properties

Physicochemical

| | | |
|---|---|---|
| Pieces (number of genome segments) | Infectivity | Sedimentation Coefficients(s) (S) |
| Percentage wt, of Virion Protein | Lipid | Carbohydrate |
| Virion Polypeptides: Number | Details | |
| Non-virion Polypeptides: Number | Details | |
| Virion Density | Sedimentation Coefficients(s) (S) | |
| Nucleocapsid Density | Sedimentation Coefficients(s) (S) | |

**Stability of Infectivity (effects)**

pH (infective range)

| | | |
|---|---|---|
| Lipid Solvent (ether - % used to test)<br>**1:10** | After Treatment Titer<br>**<2.5 dex** | Control Titer<br>**5.5 dex** |
| Lipid Solvent (chloroform) | After Treatment Titer | Control Titer |
| Lipid Solvent (deoxycholate) | After Treatment Titer<br>**1.5 dex** | Control Titer<br>**4.5 dex** |

Other (formalin, radiation)

**Virion Morphology**

| | | |
|---|---|---|
| Shape<br>**Bunyavirus-like particles (2)** | Dimensions | |
| Mean<br>nm | Range<br>nm | |
| Measurement Method<br>**Electron microscopy (2)** | Surface Projections/Envelope | Nucleocapsid Dimensions, Symmetry |

**Morphogenesis**

| Site of Constituent Formation in Cell | Site of Virion Assembly | Site of Virion Accumulation |
|---|---|---|
| Inclusion Bodies | Other | |

**Hemagglutination**

| Hemaggiutination | Antigen Source | Erythrocytes (species used) |
|---|---|---|
| **No** | **SMB ext. by sucrose-acetone** | **Goose** |
| pH Range<br>**5.9-7.3** | pH Optimum | |
| Temperature Range<br>**4dC - 37dC** | Temperature Optimum | |

Remarks

Serologic Methods Recommended
**CF, NT**

Footnotes

**Section V - Antigenic Relationship and Lack of Relationship to Other Viruses**

Related to Burg el Arab virus by CF as follows [1] :

| Antigen | Antibody | |
|---|---|---|
| | Burg el Arab | Matariya |
| Burg el Arab | 512 | 4 |
| Matariya | 128 | 128 |

Antigen did not react by CF with grouping ascitic fluids of groups A, B, C, Guama, Capim, Simbu, Bunyamwera, California, Anopheles A, Anopheles B, Turlock Tacaribe, vesicular stomatitis, Quaranfil, Kaisodi, Qalyub, and Phlebotomus fever. Matariya ascitic fluid did not react by CF with antigens of 117 presumed arboviruses and herpes simplex, LCM, NDV, rabies, ectromelia, reovirus 3 and psittacosis. Matariya serum did not inhibit hemagglutination by fowl plague virus.

## Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
**Blood (LV)**

Lab Methods of Virus Recovery (ALL ISOLATIONS)
**Newborn mice, primary hamster kidney and Vero cell cultures**

| Cell system (a) | Virus passage history (b) | Evidence of Infection | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CPE | | | PLAQUES | | | Growth Without CPE | |
| | | Day (c) | Extent (d) | Titer TCD50/ml (e) | Day (c) | Size (f) | Titer PFU/ml (e) | +/- (g) | |
| | | | | | | | | | |

## Section VII - Natural Host Range (Additional text can be added below table)

| Vertebrate (species and organ) and arthropod | No. isolations/No. tested | No. with antibody/No. tested Test used | Country and region |
|---|---|---|---|
| Sylvia curruca | 1/323 | | Egypt |
| Sylvia borin | 1/35 | | |

## Section VIII - Susceptibility to Experimental Infection (include viremia)

| Experimental host and age | Passage history and strain | Inoculation Route-Dose | Evidence of infection | AST (days) | Titer log10/ml |
|---|---|---|---|---|---|
| Mice (nb) | SMB 5 | ic 0.01 | Death | 4* | 7.5 |
| Mice (nb) | | ip 0.05 | None | | <1.5 |
| Mice (nb) | | sc | | | |
| Mice (wn) | | ic 0.03 | None | | <1.5 |
| Mice (wn) | | ip 0.2 | None | | <1.5 |

*AST for mice inoculated with a 10-3 dilution.

## Section IX - Experimental Arthropod Infection and Transmission

| Arthropod species & virus source(a) | Method of Infection log10/ml (b) | | Incubation period (c) | | Transmision by bite (d) | | Assay of arthropod, log10/ml (e) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Feeding | Injected | Days | °C | Host | Ratio | Whole | Organ | System |
| | | | | | | | | | |
| | | | | | | | | | |

## Section X - Histopathology

Character of lesions (specify host)

Inclusion Bodies — Intranuclear

Organs/Tissues Affected

Category of tropism

## Section XI - Human Disease

| | | |
|---|---|---|
| In Nature | Residual | Death |
| Subclinical | Overt Disease | |
| **Reported** | | |
| Clinical Manifestations | | |
| Number of Cases | Category (i.e. febrile illness, etc.) | |

## Section XII - Geographic Distribution

Known (Virus detected)
**Egypt: also probably Europe since birds arrived viremic in Egypt from Europe.**

Suspected (Antibody only detected)
**Europe**

## Section XIII - References


1. Shope, R.E. Personal communication.
2. Harrison, A., et al. Personal communication. 1981.
3. The Subcommittee on Arbovirus Laboratory Safety of the Americain Committee on Arthropod-Borne viruses. 1980. Am. J. Trop. Med. Hyg. 29: 1359-1361.


## Remarks