**Figures**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | |  | | | |
| **(Fig. 1-A)** | | **(Fig. 1-B)** | | **(Fig. 1-C)** | | | |
|  | | |  | | |  |
| **(Fig. 1-D)** | | | **(Fig. 1-E)** | | | **(Fig. 1-F)** |
|  |  | | | |  | |
| **(Fig. 1-G)** | **(Fig. 1-H)** | | | | **(Fig. 1-I)** | |

**Fig. (1):-Eggs and parthenitae extracted from examined laboratory and field collected snails (fresh non mounted specimens)**

(1-A)- *Fasciola* eggs of different sizes, very small (a), medium spherical (b), elongated (c) and large one (d) present in one field collected and purified from stool (X 125)

(1-B)– Three radial generations from experimentally infected *L*. *cailliaudi* before formation of cercaria at 18th day post infection (X 40).

(1-C) – Formation of cercariae in the 1st generation radia at 28th day P.I. (X40).

(1-D)- *Paramphistomum* Spp. Radia and Cercaria pigmentata (X 125)

(1-E)- Different views of *Xiphidio* cercariae type from field collected snails (X 125).

(1-F)- Immature *F. gigantica* worm 45 days old extracted from rabbit, mounted specimen (X20).

(1-G)- *Fasciola* cercaria shed from laboratory infected *L.* *cailliaudi* (X 125).

(1-H) -Rapid encysment of shedded cercariae showing transparent cyst wall (X125).

(1-I) - Type of encysted metacercariae extracted from field collected snails (X100).

**Tables**

**Table (1): Incidence of *Fasciola* infection among the examined stool samples during the year.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **District** | **Kafr El-Sheik** | | | | **El-Hamool** | | **Sedi Salem** | | **Motobus** | | **Desouk** | | **Total** | | | |
| **Sheno** | | **El-Halafy** | | **El-Kafr El-Shrki** | | **Sedi Salem** | | **Motobus** | | **Abioka** | |
| **Season** | **No.**  **Exam.** | **% of Fascio**  **Inf** | **No.**  **Exam.** | **% of Fascio**  **Inf** | **No.**  **Exam.** | **% of Fascio**  **Inf** | **No.**  **Exam.** | **% of Fascio**  **Inf** | **No.**  **Exam.** | **% of Fascio**  **Inf** | **No.**  **Exam.** | **% of Fascio**  **Inf** | **No.**  **Exam.** | **No.**  **+Ve** | **% of Fascio.**  **Inf** |
| Winter | 60 | 0.0 | 80 | 3.75 | 80 | 2.5 | 60 | 10 | 60 | 8.33 | 40 | 7.5 | 380 | 19 | 5.0 |
| Spring | 120 | 2.5 | 100 | 6.0 | 100 | 5.0 | 60 | 6.66 | 60 | 10 | 60 | 6.66 | 500 | 28 | 5.66 |
| Summer | 100 | 7.0 | 60 | 3.33 | 120 | 5.0 | 80 | 8.75 | 80 | 7.5 | 80 | 6.25 | 520 | 40 | 7.69 |
| Autumn | 100 | 6.0 | 80 | 5.0 | 70 | 5.7 | 60 | 8.33 | 40 | 0.0 | 60 | 5.0 | 410 | 22 | 5.36 |
| **Total** | **380** | **6.0** | **320** | **4.68** | **370** | **4.59** | **260** | **8.46** | **240** | **7.08** | **240** | **6.25** | **1810** | **109** | **6.02** |

**\*No.Exam. = number of examined fecal and stool samples. \* % Fas. Inf. = % of samples showing *Fasciola* Species eggs.**

**Table (2): Percentage of *Trematode* infection in the different snails collected from the study sites**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of District** | **Kafr El-Sheikh** | | | | **El-Hamool** | | **Sedi Salem** | | **Motobus** | | **Desouk** | |  | | |
|  | **Sheno** | | **El-Halafy** | | **El-Kafr El-Shrki** | | **Sedi Salem** | | **Motobus** | | **Abioka** | | **Total** | | |
| **Type of snail** | **No.**  **coll-ect** | **% of Inf. snail** | **No.**  **col-lect** | **% of Inf. snail** | **No.**  **collect** | **% of Inf. snail** | **No.**  **coll-ect** | **% of Inf. snail** | **No. coll-ect** | **% of Inf. snail** | **No.**  **coll-ect** | **% of Inf. snail** | **No.**  **collect** | **No. infec-ted** | **% of**  **Infected snail** |
| ***Lymnaea cailliaudi*** | **1600** | **36.18** | **520** | **12.5** | **636** | **24** | **1192** | **38.0** | **1164** | **41.8** | **1040** | **22.5** | **6152** | **1972** | **32.05** |
| ***Lymnaea alexandrina*** | **76** | **0.0** | **10** | **0.0** | **0.0** | **0.0** | **70** | **0.0** | **52** | **0.0** | **60** | **0.0** | **268** | **00** | **0.0** |
| ***Bulinus species*** | **148** | **11.4** | **20** | **10.0** | **52** | **9.6** | **105** | **12.3** | **101** | **4.8** | **76** | **9.2** | **502** | **59** | **11.75** |
| ***Biomphalaria***  ***alexandrina*** | **2800** | **54.0** | **596** | **38.08** | **556** | **36.15** | **2534** | **74.04** | **2480** | **79.03** | **2350** | **66.0** | **11316** | **7327** | **64.74** |
| ***Cleopatra species*** | **290** | **0.0** | **98** | **0.0** | **200** | **0.0** | **300** | **9.0** | **250** | **8.0** | **260** | **0.0** | **1398** | **47** | **3.36** |
| ***Physa acuta*** | **2200** | **15.7** | **920** | **12.06** | **1300** | **9.0** | **1700** | **21.0** | **1400** | **23.0** | **1000** | **18.0** | **8520** | **1263** | **14.82** |
| ***Melania tuberculata*** | **55** | **5.45** | **28** | **7.14** | **48** | **12.5** | **115** | **6.95** | **115** | **0.0** | **59** | **0.0** | **420** | **28** | **6.66** |
| ***Vivipara (Bellamya unicolar)*** | **200** | **22.0** | **105** | **20.0** | **110** | **20.0** | **190** | **24.2** | **200** | **26.0** | **120** | **19.16** | **925** | **2132** | **23.03** |
| ***Neritina nilotica*** | **42** | **0.0** | **0.0** |  | **0.0** | **0.0** | **36** | **0.0** | **42** | **0.0** | **12** | **0.0** | **144** | **0.0** | **0.0** |
| ***Planorbis philippi*** | **250** | **0.0** | **230** | **0.0** | **260** | **0.0** | **300** | **0.0** | **300** | **0.0** | **230** | **0.0** | **1570** | **48.0** | **3.05** |

**\*No.collect. = number of snails collected. \*\*No. infec = number of snails showing trematoda infection + % of Inf.snail = % of infected snails.**

**Table (3): Percentage of different types of *Trematoda* larvae detected in all of the infected snails collected during the year.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Types of the**  **examined snails** | **Types and % of infection by specific cercarial species** | | | | **Types and % of infection by non specific cercarial species** | | | |
| ***Fasciola* cercariae** | ***Schistosoma* cercariae** | ***Paramphistomatidae* cercariae** | ***Echinostomatidae* cercariae** | ***Xiphidio* cercariae**  **(type I)** | ***Xiphidio* cercariae**  **(type II)** | ***Xiphidio* cercariae**  **(type C)** | **Tissue EMC** |
| ***Lymnaea cailliaudi*** | **45.17%** |  |  |  | **9.79** | **44.4** | **14.91** | **14.12** |
| ***Bulinus species*** |  | **39.8%** | **8.33%** |  | **26.75** |  |  | **26.75** |
| ***Biomphalaria***  ***alexandrina*** |  | **65.06%** |  |  | **21.18** |  | **11.25** |  |
| ***Cleopatra***  ***species*** |  |  |  |  | **47.4** | **2.58** |  |  |
| ***Physa acuta*** |  |  |  | **29.76%** | **70.22** |  |  | **29.56** |
| ***Melania tuberculata*** |  |  |  |  | **50** |  |  |  |
| ***Vivipara (Bellamya unicolar)*** |  |  |  |  |  | **14.10** | **85.8** |  |
| ***Planorbis philippi*** |  |  |  |  | **75%** |  |  |  |