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## LARVAE INFECTION IN FRESH WATER FISH AND CRAB IN SOME AREAS IN THE NORTH OF VIETNAM

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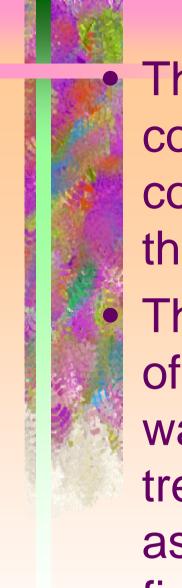


Fish borne and crustacean borne trematode are major problem of public health and widely distributed in Vietnam.

The small liver flukes as Clonorchis/Opisthorchis was found in more than 32 provinces with the infection rate varied from 0.2% to 40%.

#### INTRODUCTION....

- Small intestinal flukes in Families of Heterophyidae and Echinostomatidae are distributed in more than 18 provinces of the country, its highest is 53.4%.
- Paragonimus is distributed in more than 10 provinces, its highest is 15%



The habit of eating raw-food is very common in Vietnam, but no study on contamination of alive metacercaria in these food in Vietnam was carried out.

Therefore, an assessment of prevalence of fish borne helminthic infection in fresh water fishes and crustacean borne trematode in fresh water crab and assessment of alive matacercaria in raw-fish and baked-crab are needed





#### **OBJECTIVES**

- To determine fishborne trematode and Gnathostoma spp larvae in fresh water fish and Paragonimus metacercaria in fresh water crab in endemic areas in the North of Vietnam.
- To assess alive metacercaria in raw-fish dish and baked-crab dish



- Fish and crab examination by digestion technique and
- assessment alive metacercaria by morphology method

### RESULTS

#### The fishborne trematode infection in fish

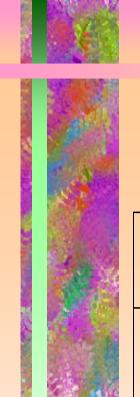
Species of fish	In the endemic areas			In Hanoi markets		
	Number	Number	%	Number	Number	%
	checking	(+)	infection	checking	(+)	infection
Silver carp	221	134	60.6	60	0	0
Grass carp	48	25	52.1	60	8	13.3
Mud carp	52	16	30.7	60	1	1.7
Common carp	48	12	25.0	60	2	3.3
Carassius	50	10	20.0	60	13	21.7
Tilapia	30	6	20.0	60	1	1.7
Snake-head fish	20	1	5.0	60	2	3.3
Total	469	204	43.5	420	27	6.4

# The *Gnathostoma* larvae infection in snake-head fish and eel

<b>Species of</b>	Species of			In Hanoi market			
fish	Number	Number	%	Number	Number	%	
	checking	(+)	infection	checking	(+)	infection	
Snake-head fish	50	4	8.0	81	1	1.2	
Eel	50	3	6.0	95	8	8.4	
Total	100	7	7.0	176	9	5.1	

#### The Paragonimus metacercaria infection in crab

Study site	Crab examination for Potamiscus spp.			Crab examination for Parathelphusa spp.		
	No	No	Infecti	No	No	Infecti
	exam	(+)	on %	exam	(+)	on %
Lai Chau pro.	52	51	98.1	25	0	0
Son La pro.	116	74	63.8	20	0	0
Hoa Binh pro.	67	37	55.2	20	0	0
Lao Cai pro.	45	43	95.6	25	0	0
Yen Bai pro.	50	36	72.0	30	0	0
Ha Giang pro.	24	3	12.5	20	0	0
Nghe An pro.	31	3	9.7	10	0	0
Total	385	247	64.2	150	0	0

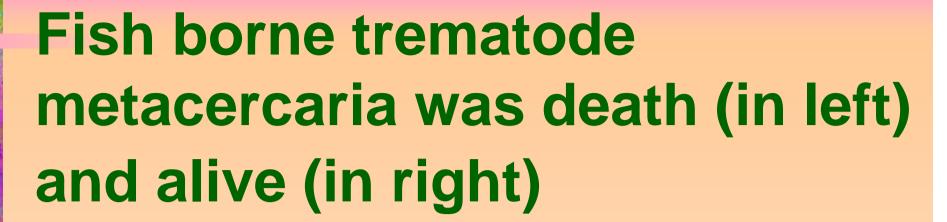


## The rate of alive metacercaria of fishborne trematode in raw-fish

In raw-fish/in mix	No larvae	Alive larvae	The rate of
solution			alive
Metacercaria in raw-	300	285	95%
fish for checking			
directly			
Metacercaria in mix	200	186	93%
solution of vegetables			
in 4 hours			
Total	500	471	94.2%

### The rate of alive metacercaria of Paragonimus in baked-crab

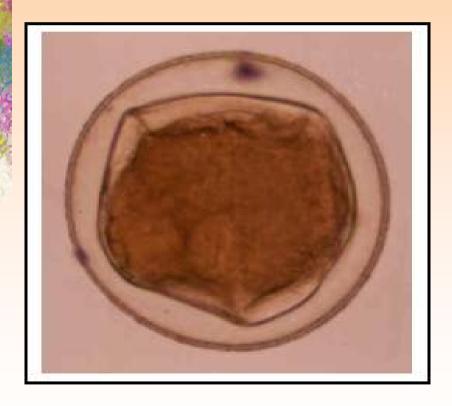
	Kind of baked No larvae for		No alive	Rate of alive
10 M. 11 M.	crab	checking	larvae	
	Yellow cover	300	195	65%
	baked crab			
	Black cover	150	35	23.3%
	baked crab			
	Total	450	230	51.1%







# Paragonimus metacercaria was death (in left) and alive (in right)





### Thank you very much!

