

Table 17. Bacteria isolated in the bacteriology section during 1980

Isolated bacteria	Animal Code										
	C	E	G	S	P	Ch	D	H	OA	OS	
<i>Escherichia coli</i>		+		+	+	+				++	
<i>E. coli</i> (OK:I, O 136;K 78)					+						
<i>E. coli</i> (OK:III, O 44;K 74)					+						
<i>E. coli</i> (OK:I, O 26a;K 61)										(+)	
<i>E. coli</i> (AD group)					(+)	(+)		(+)			
<i>Salmonella cholerae-suis</i>					+						
<i>Shigella</i> sp.					+						
<i>Proteus</i> sp.	+	+		+	+	+					
<i>Proteus morgani</i>			(+)								
<i>Klebsiella</i> sp.					+						
<i>Enterobacter</i> sp.										+	
<i>Citrobacter</i> sp.	+										
<i>Pasteurella multocida</i>		+								+	
<i>Pasteurella hemolytica</i>					(+)						
<i>Plesiomonas</i> sp.					(+)	(+)					
<i>Necromonas</i> sp.	(+)										
<i>Chromobacterium</i> sp.	(+)	(+)									
<i>Pseudomonas</i> sp.	(+)									+	
<i>Neisseria catarrhalis</i>	+										
<i>Neisseria elongata</i>										(+)	
<i>Acinetobacter anitratus</i>	+	+			+	+					
<i>Erysipelothrix rhusiopathiae</i>					(+)						
<i>Staphylococcus</i> sp.	+	+			+	+					
<i>Clostridium septicum</i>			(+)								
<i>Nocardia asteroides</i>					(+)						
<i>Corynebacterium pyogenes</i>			(+)								
<i>Lactobacillus</i> subgenus <i>atryptobacterium</i>	(+)										
<b>FUNGI</b>											
<i>Aspergillus</i> sp.					(+)	(+)				(+)**	
<i>Mucor</i> sp.										(+)**	

Animal code: C; Cattle, B; buffalo, G; goats, S; sheep, P; pigs, Ch; chickens, D; ducks, H; horses, OA; other animals, OS; other specimens, \*: rabbits, \*\*: pig feed, +: isolation of organism, (+): first isolation at D.I.C., Medan.

Table 18. Bacteria isolated in the bacteriology section during 1981

Isolated bacteria	Animal Code									
	C	B	G	S	P	Ch	D	H	OA	OS
Escherichia coli	+	+				+	+			
E. coli (AD group)						+			++	
E. coli (OK:III, O 143;K X1)						(+)				
E. coli (OK:III, O 125;K 70)						(+)				
Salmonella typhi (O;D(9))			(+)							
Salmonella arizona	(+)									
Klebsiella sp.		+				+				
Klebsiella pneumoniae	+					+				
Klebsiella rhinoaccleromatis	(+)									
Klebsiella edwardsii						(+)				
Proteus sp.	+	+				+				
Enterobacter sp.			+							
Yersinia sp.			(+)							
Yersinia enterocolitica						(+)				
Citrobacter sp.		+								
Citrobacter koseri			(+)							
Shigella flexneri							+			
Pasteurella sp.						+			+++	
Pasteurella multocida	+	+				+				
Pasteurella hemolytica	+		+							
Pasteurella urene			(+)							
Pseudomonas sp.	+	+				+	+			
Neisseria sp.			+							
Neisseria caviae		(+)								
Neisseria catarrhalis	+	+								
Neisseria meningitidis	(+)									
Neisseria pharyngis	(+)	(+)								
Acinetobacter anitratus	+					+	+			
Chromobacterium sp.	+					+	+			
Flavobacterium menigosepticum	(+)	(+)								
Cardiobacterium hominis						(+)				

Animal code: C; cattle, B; buffalo, G; goats, S; sheep, P; pigs, Ch; chickens, D; ducks, H; horses, OA; other animals, OS; other specimens, \*: rabbits, \*\*: guinea pigs, +: isolation of organism, (+): first isolation at D.I.C., Medan.

Table 18. Continued.

Isolated bacteria	Animal Code									
	C	B	G	S	P	Ch	O	H	OA	OS
<i>Staphylococcus</i> sp.	+	+			+	+				
<i>Staphylococcus aureus</i>	+	+	+			+				
<i>Streptococcus</i> sp.			+							
<i>Streptococcus uberis</i>			(+)							
<i>Nocardia asteroides</i>					+					
<i>Mycobacterium avium</i>					(+)					
<i>Corynebacterium ovis</i>		(+)								
<i>Corynebacterium bovis</i>			(+)							
<i>Corynebacterium</i> sp.			+							
<i>Propionibacterium acnes</i>	(+)									
<i>Bacillus alvei</i>	(+)									
<i>Bacillus subtilis</i>					(+)					
<i>Bacillus coagulans</i>	(+)									
<i>Lactobacillus</i> sp.		+								
<i>Streptobacillus moniliformis</i>			(+)							
<i>Mycoplasma</i> sp.					(+)					
<u>Fungi</u>										
<i>Aspergillus</i> sp.					+					
<i>Trichophyton</i> sp.	(+)									

Animal code: C; cattle, B; buffalo, G; goats, S; sheep, P; pigs, Ch; chickens, D; ducks, H; horse, OA; other animals, OS; other specimens, \*: rabbit; \*\*: guinea pigs, +: isolation of organism, (+): first isolation at D.I.C., Medan.

Table 19. Viruses isolated from 1979 to 1981

Virus	Animal	Year	Isolation	Identification
Newcastle disease	Chickens	1979	Embryonic egg inoculation	FAT, HA(1)
Rabies	Dogs	1979	Mouse inter-cerebral inoculation	FAT
Infectious bovine rhinotracheitis	Buffalo	1981	Tissue culture (MDBK strain cell)	CPE, A type intranuclear inclusion, FAT

(1): hemagglutination

Table 20. Identified parasites at parasitology

Classification	Name of parasite	Host	Identified year
Protozoa	<i>Trypanosoma evansi</i>	horses, cattle, buffalo	1977
	<i>Eimeria tenella</i>	chickens	1977
	<i>E. deblickei</i>	swine	"
	<i>E. spp.</i>	cattle, buffalo goats	"
	<i>Leucocytozoon caulleryi</i>	chickens	1980
	<i>Babesia bigemina</i>	cattle, buffalo	1980
	<i>Theileria sp.</i>	cattle	1981
	<i>Anaplasma centrale</i>	cattle, buffalo	1977
	<i>A. marginale</i>	" "	1980
	<i>Toxoplasma gondii</i>	swine	1978
Platyhelminthes	<i>Balantidium coli</i>	cattle	1977
	<i>Paramphistomum spp.</i>	cattle, buffalo	1978
	<i>Fasciola hepatica</i>	cattle, buffalo	1977
	<i>Schistosoma sp.</i>	cattle	1979
Nemathelminthes	<i>Paragonimus sp.</i>	cattle, buffalo	1979
	<i>Trichuris suis</i>	swine	1979
	<i>T. spp.</i>	cattle	"
	<i>Strongyloides ransomi</i>	swine	1979
	<i>S. papillosus</i>	cattle, buffalo, sheep, goat	"
	<i>Ascaris suum</i>	swine	1977
	<i>Neoascaris vitulorum</i>	cattle, buffalo	"
	<i>Toxocara canis</i>	dogs	"
	<i>Ascaridia galli</i>	chicken	"
	<i>Poteriostomum spp.</i>	horses	1978
	<i>Oesophagostomum radiatum</i>	cattle, buffalo	1978
	<i>O. spp.</i>	sheep, goats	"
	<i>Ancylostoma spp.</i>	dogs	1979
	<i>Bunostomum phlebotomum</i>	cattle, buffalo	1977
	<i>B. trigonocephalum</i>	goats	"
<i>Globocepharus urosbulatus</i>	swine	"	
<i>Trichostrongylus spp.</i>	cattle, buffalo	1978	
<i>Haemonchus contortus</i>	cattle, buffalo, sheep, goats	1977	
<i>Mecistocirrus digitatus</i>	cattle, buffalo	"	

Table 20. Continued.

Classification	Name of parasite	Host	Identified year
	<i>Ostertagia ostertagi</i>	cattle, buffalo	1979
	<i>Cooperia punctata</i>	cattle, buffalo	1977
	<i>Nematodirus</i> spp.	cattle, buffalo	1979
	<i>Setaria digitata</i>	cattle	1978
	<i>S.</i> spp.	buffalo	1978
Arthropoda	<i>Roophilus microplus</i>	cattle, buffalo	1981
	<i>Rhipicephalus</i> sp.	cattle	"
	<i>Argas robertsi</i>	chickens	1981
	<i>Demodex caprae</i>	goats	1981
	<i>Sarcoptes scabiei</i>	buffalo, shecp, coat, swine	1978
	<i>Haematopinus curysternus</i>	cattle	1981
	<i>H. suis</i>	swine	"
	<i>Culicoides arakawae</i>	chickens	1982
	<i>C.</i> spp.	"	"
	<i>Tabanus megalops</i>	cattle, buffalo	1981
	<i>T. rubidens</i>	" "	"
	<i>T. optatus</i>	" "	"
	<i>T. ceylonicus</i>	" "	"
	<i>T.</i> sp.	" "	"
	<i>Stomoxys calcitrans</i>	cattle, buffalo	1981
	<i>Haematobia irritans</i>	cattle, buffalo	"
	<i>Hypobosca maculata</i>	cattle, horse	1980

Figure 1. Percentage of respective applications of various animals submitted to diagnostic services over the five years

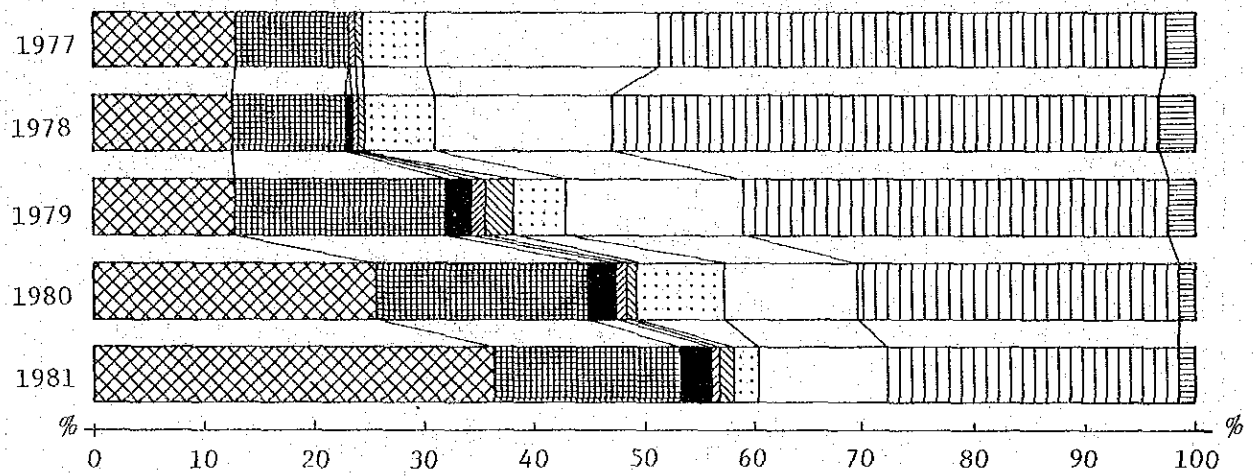


Figure 2. Percentage of respective head of various animals submitted to diagnostic services over the five years

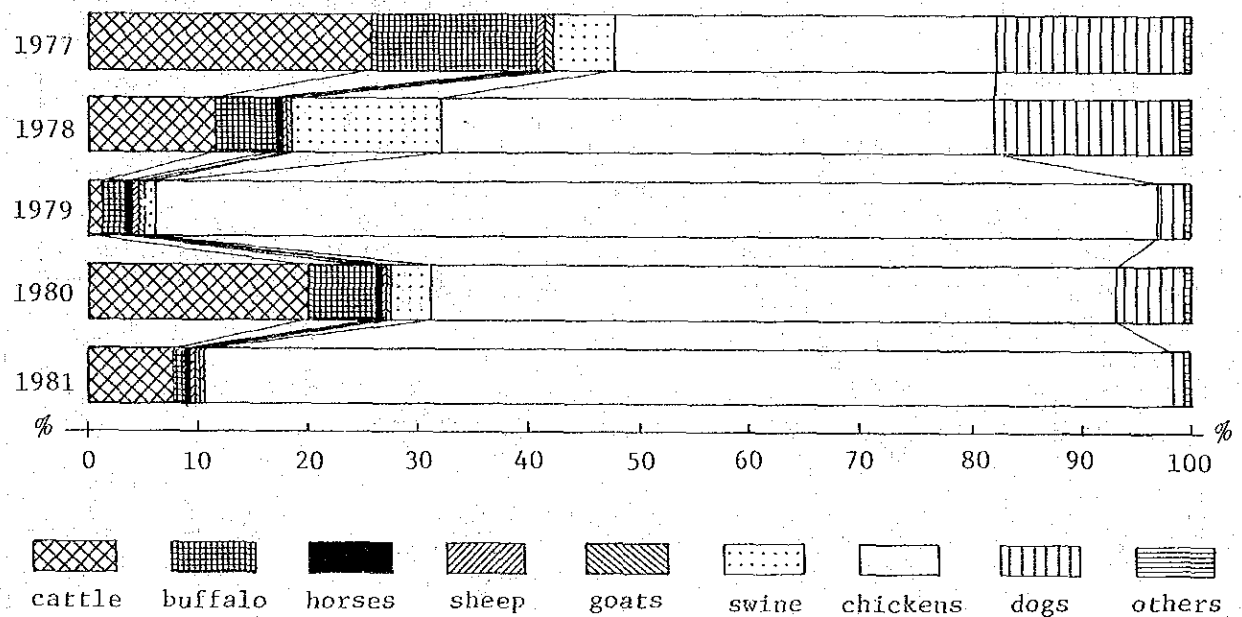


Figure 3. Applications and animals submitted to diagnostic services over the five years

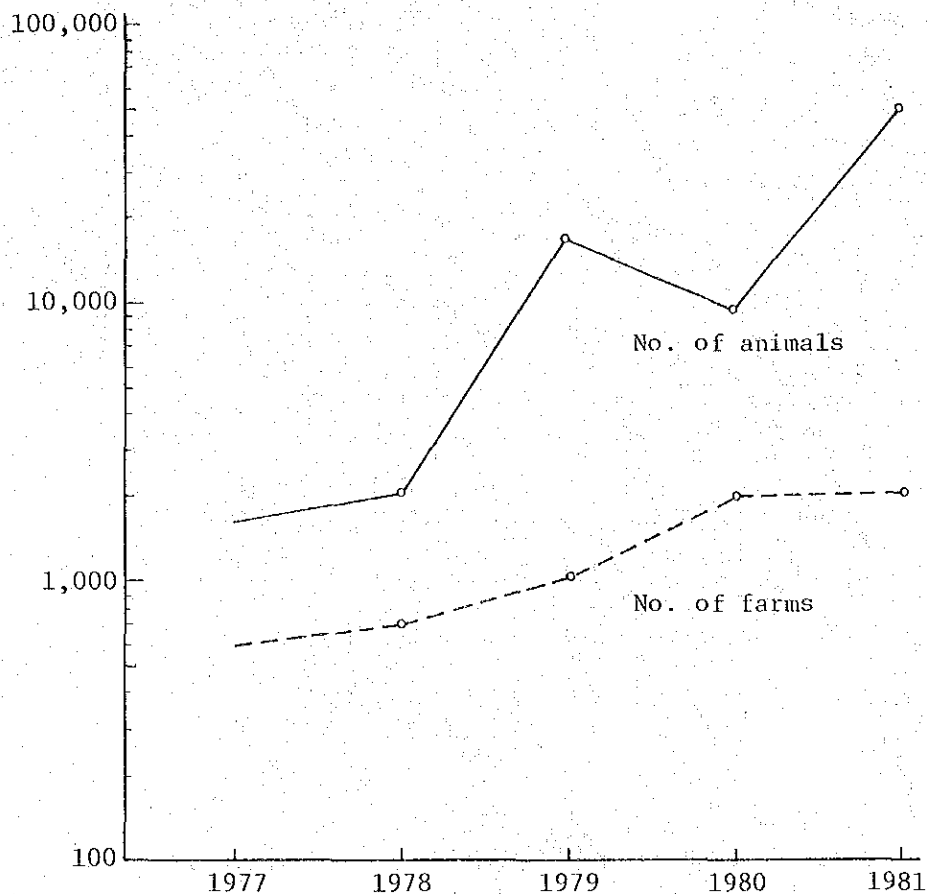


Figure 4. Percentage of kinds of animals and specimens submitted to diagnostic services

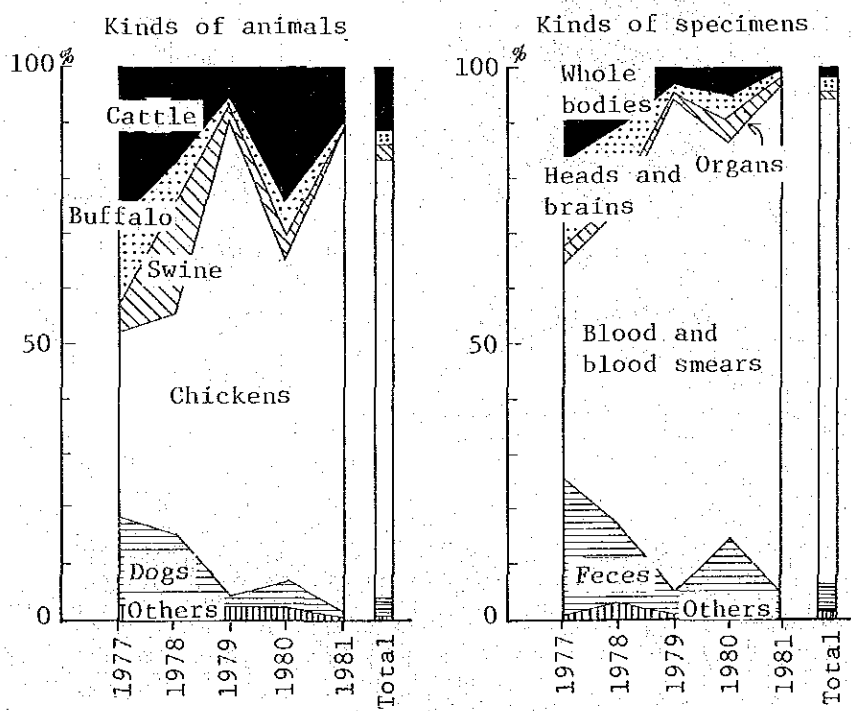
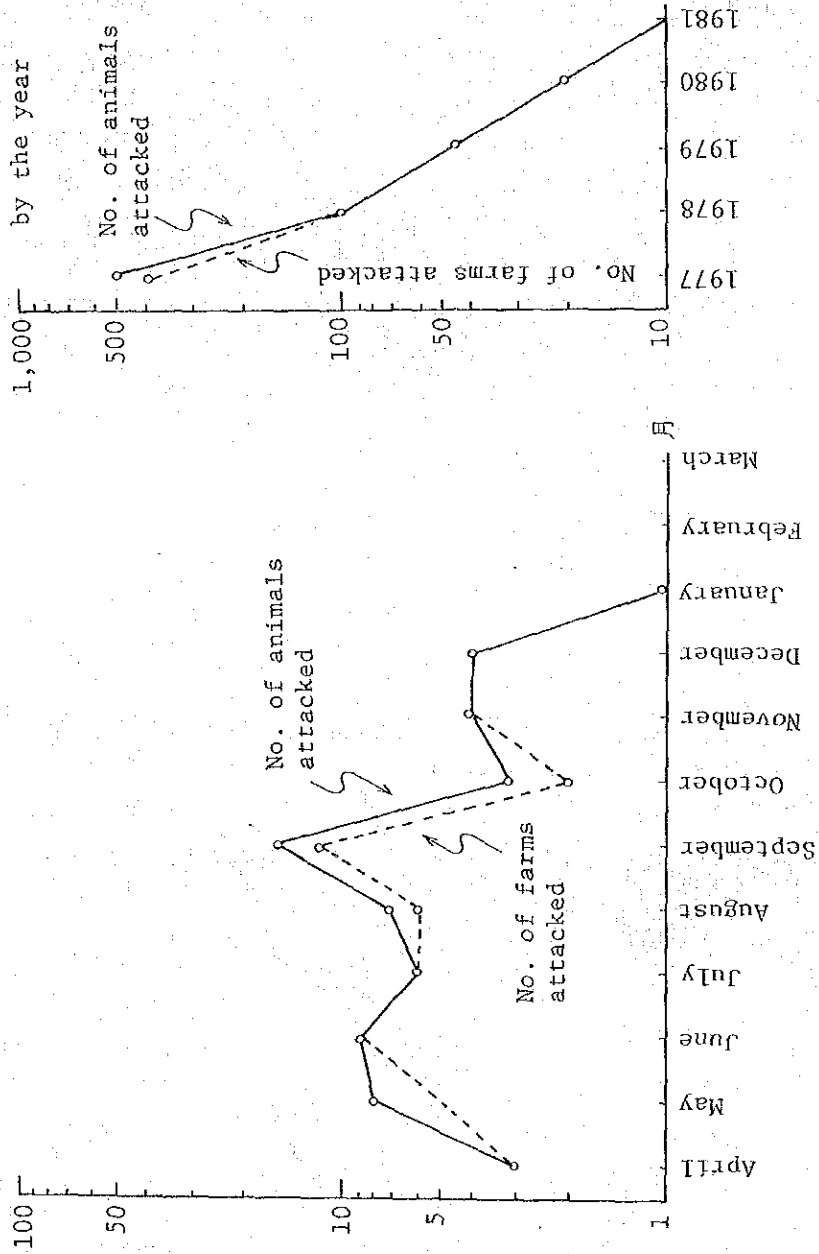


Figure 5. Monthly occurrence of Hemorrhagic septicemia over the five years







: area where hemorrhagic septicemia of cattle and buffalo occurred and where the causative organism (*Pasteurella multocida*) was isolated during 1981.

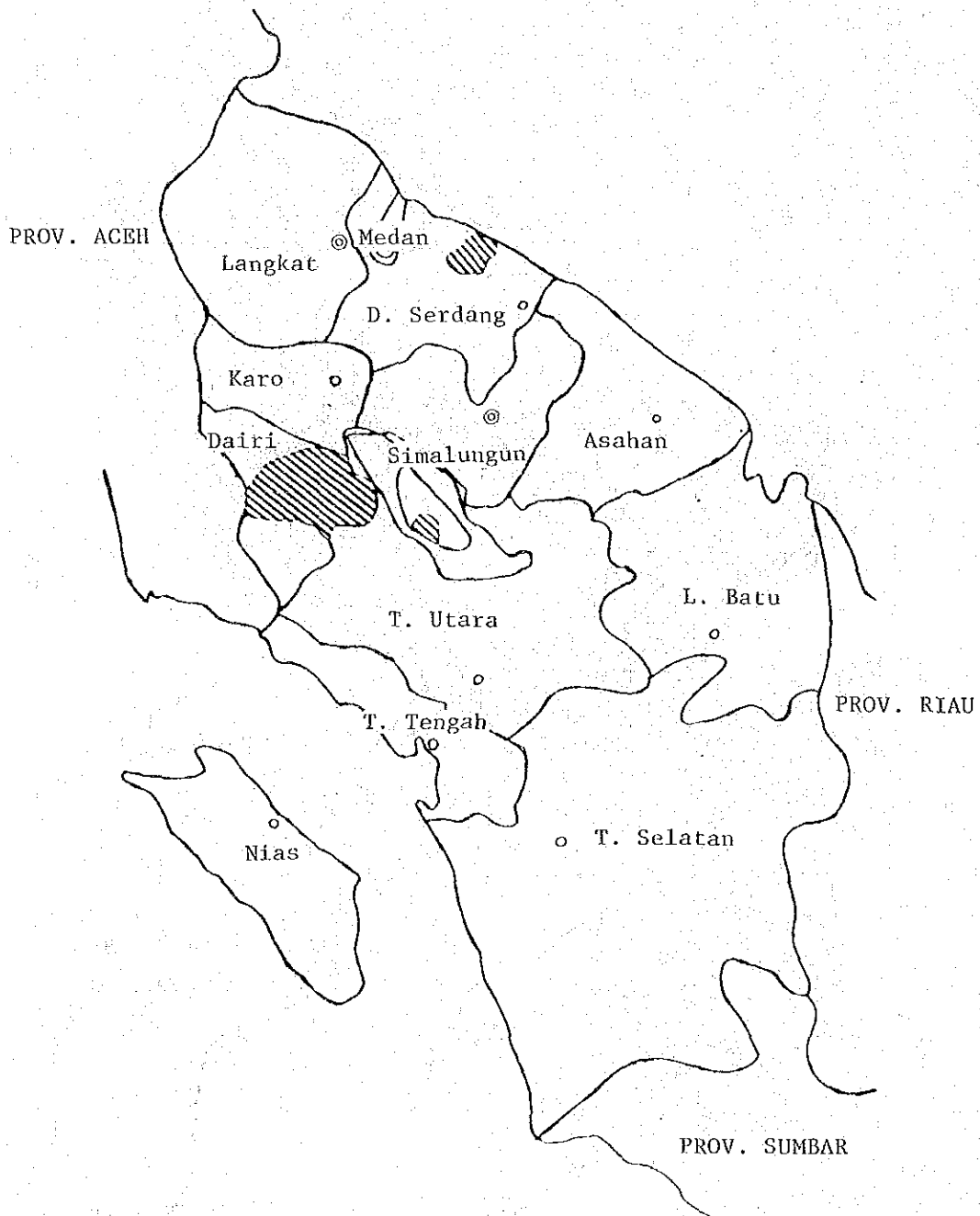
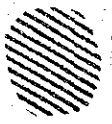


Figure 6. The distribution of hemorrhagic septicemia in cattle and buffalo in the province of North Sumatra during 1981

Many cases in domestic animals were reported during 1977 and 1978, but since they had not rotted it is uncertain whether the causative organism was *Pasteurella multocida* or not.



area where hemorrhagic septicemia of cattle and buffalo occurred and the causative organism (*Pasteurella multocida*) was isolated up to 1982

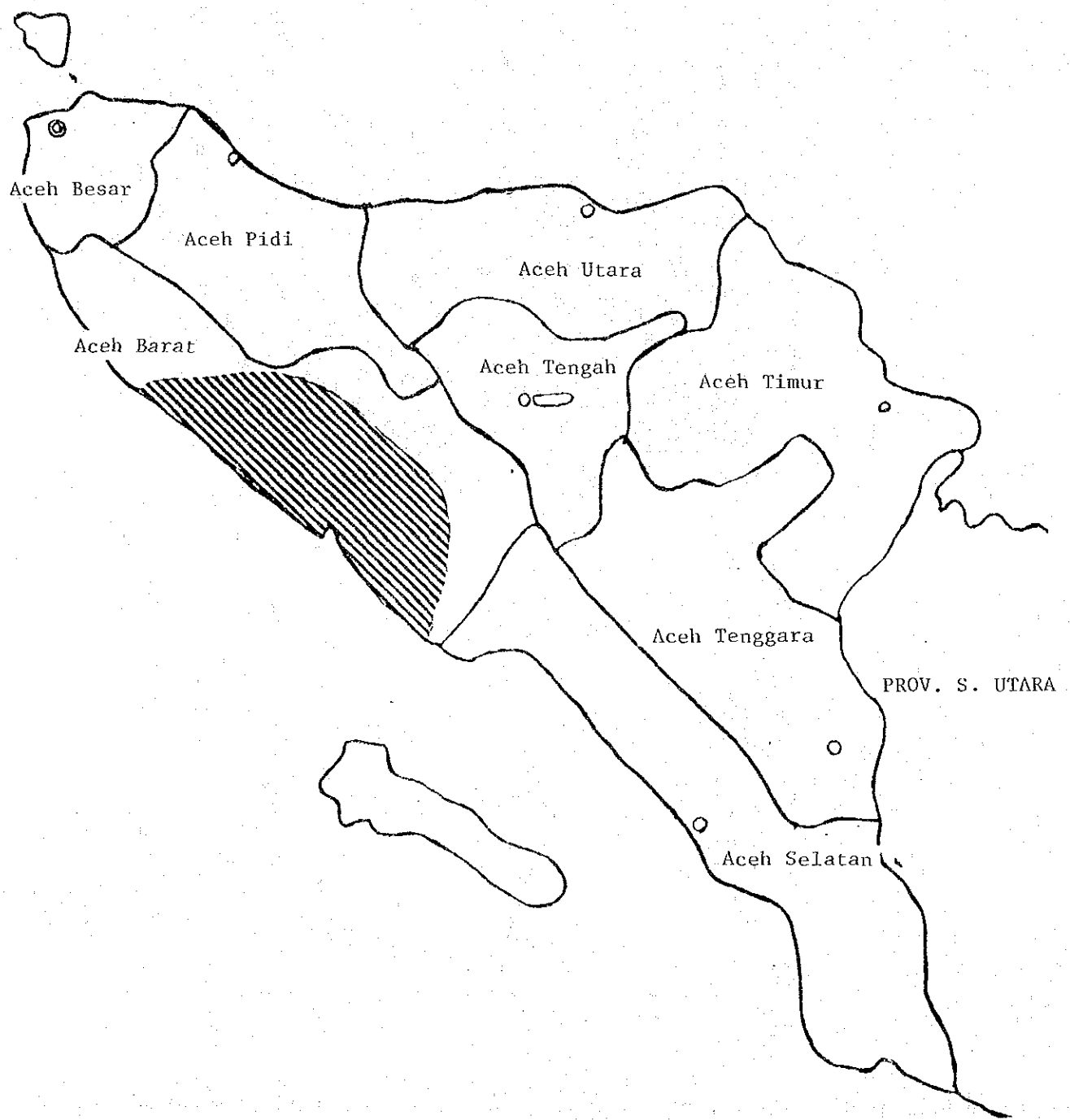


Figure 7. The distribution of hemorrhagic septicemia of cattle and buffalo in the province of Aceh up to 1982

In the province of Aceh, the outbreak of the disease in 1977 gave the biggest economic harm in the recent history of both areas.

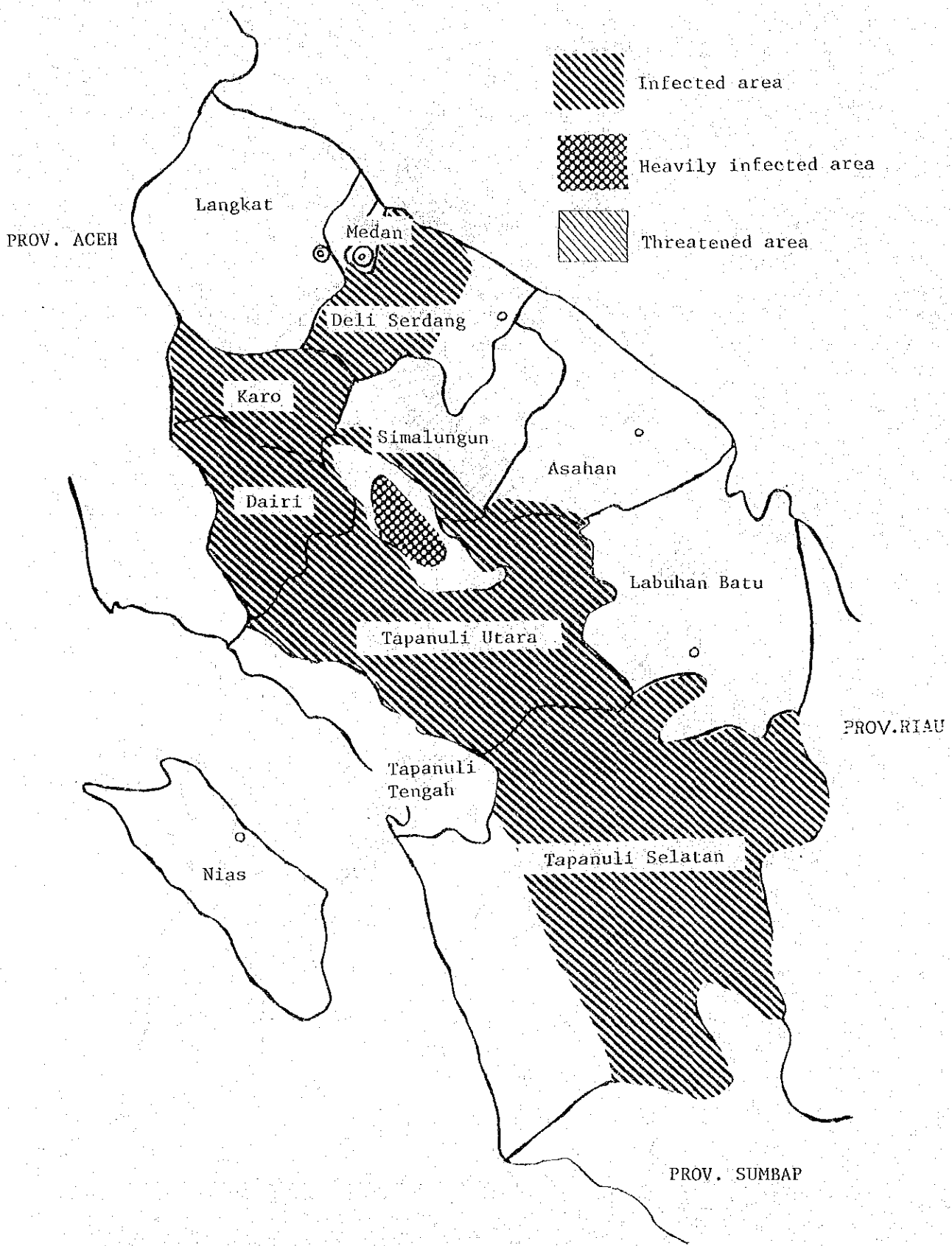


Figure 8. The occurrence distribution of surra over the five years (North Sumatra Province)

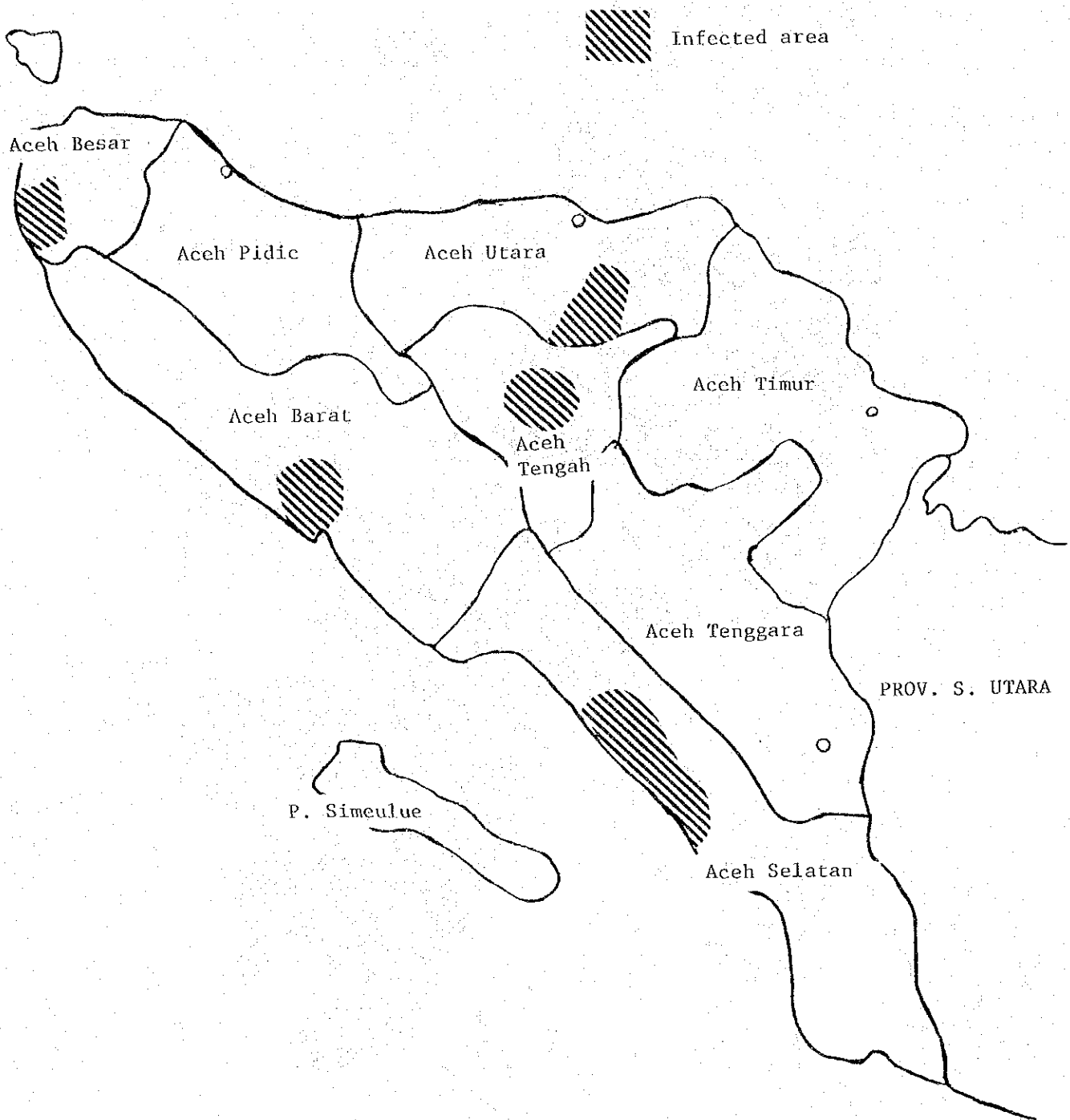


Figure 9. The occurrence distribution of surra over the five years (Aceh Province)

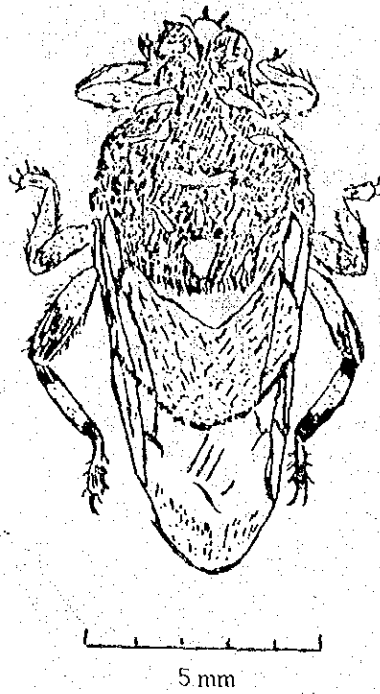


Figure 10. Adult *Hippobosca maculata*  
(by J. Araki)

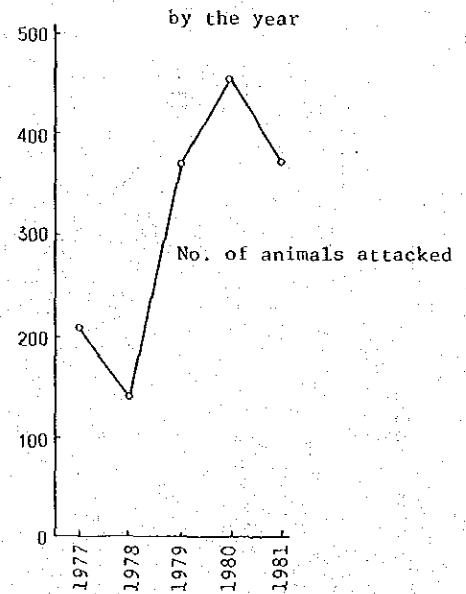
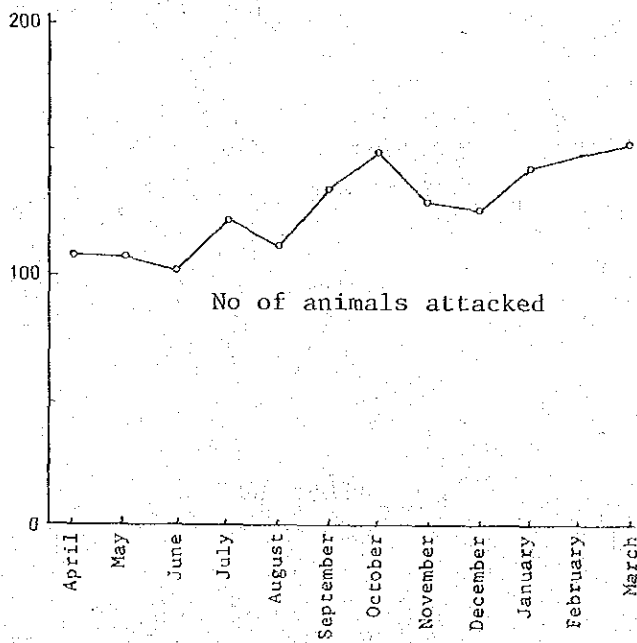


Figure 11. Monthly occurrence of rabies over the five years

64 ← : total number inspected  
 [cross-hatched] ← : ratio of the positive  
 [white] ← : ratio of the negative

'77 ← : the year (April 1977 - March 1978)

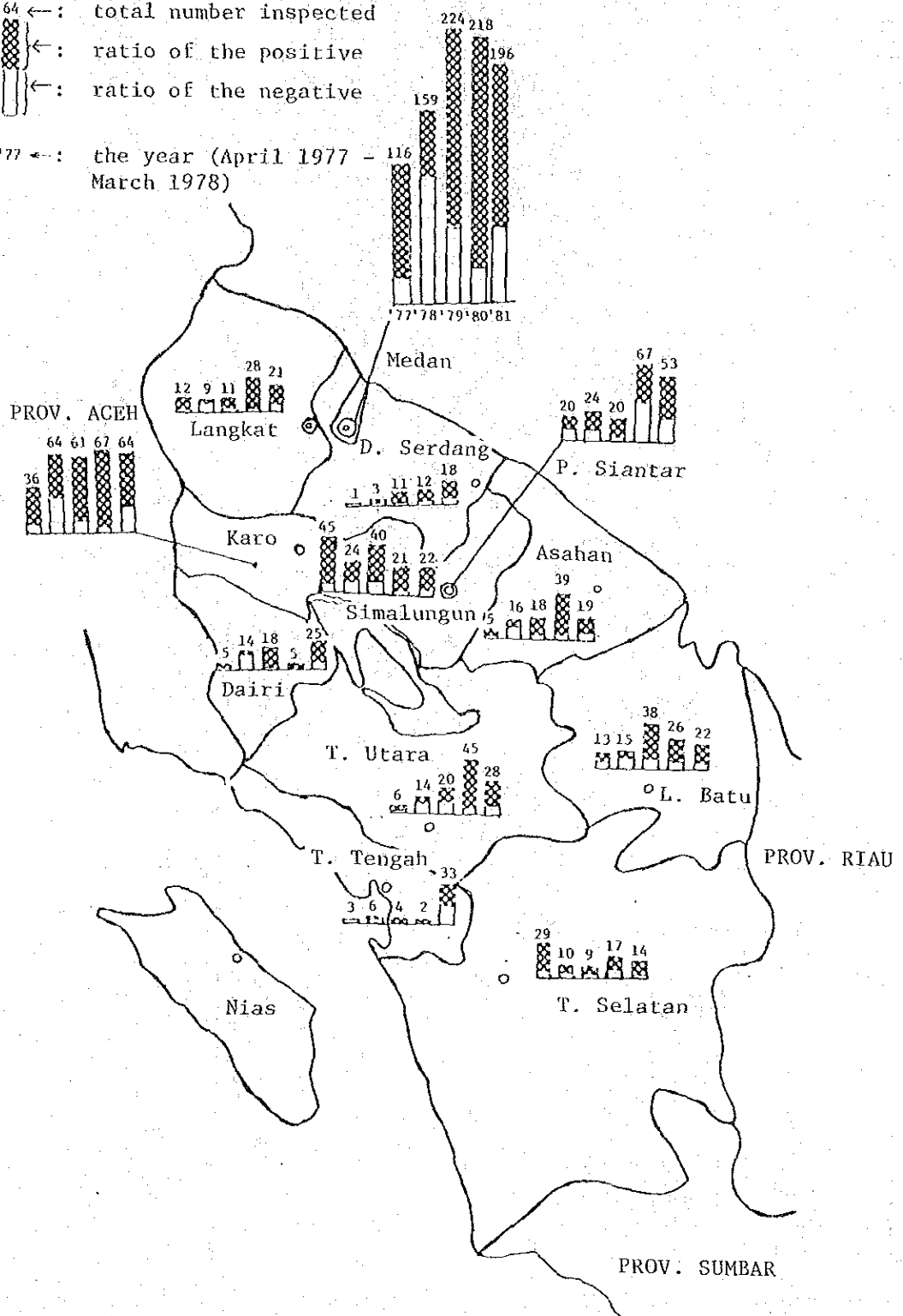


Figure 12. The occurrence and distribution of rabies in the province of North Sumatra from 1977 - 1981.

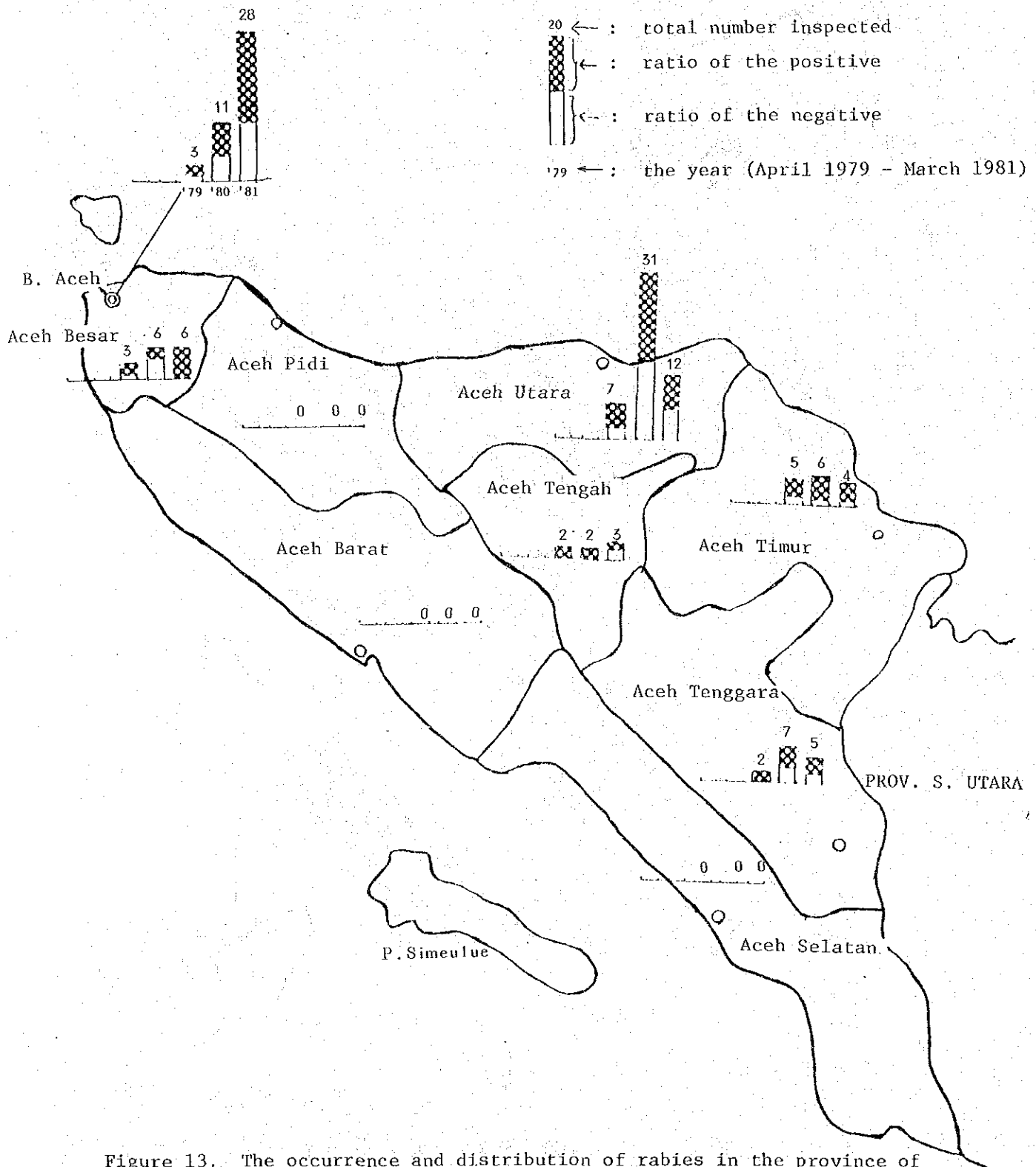


Figure 13. The occurrence and distribution of rabies in the province of Aceh during the 3 years from 1979 to 1981



: areas where bovine's positive reactors to the brucella serological test were detected up to 1982

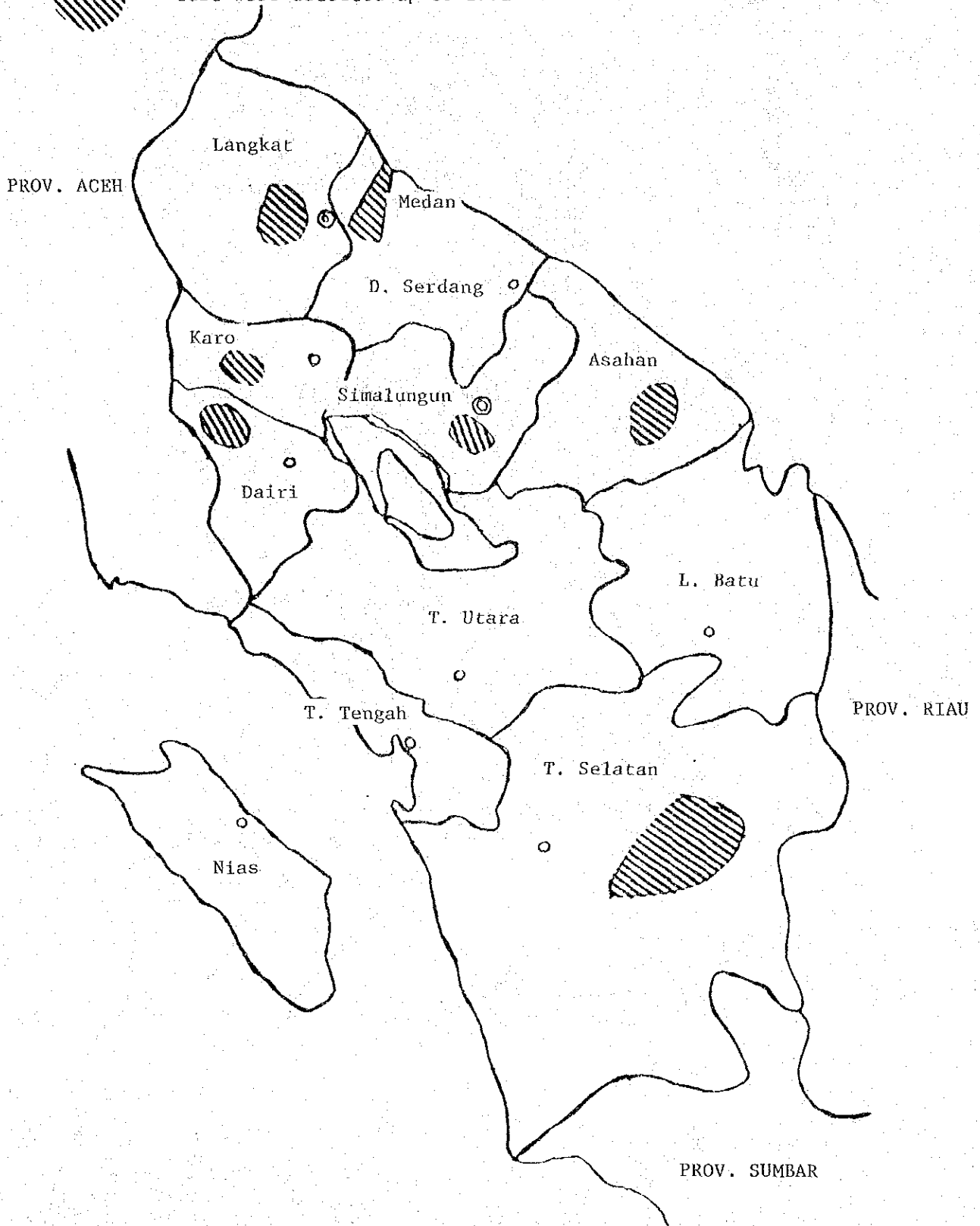


Figure 14. The distribution of bovine's positive reactors to the brucella serological test up to 1982 (North Sumatra Province)





: areas where bovine's positive reactors to the brucella serological test were detected up to 1982

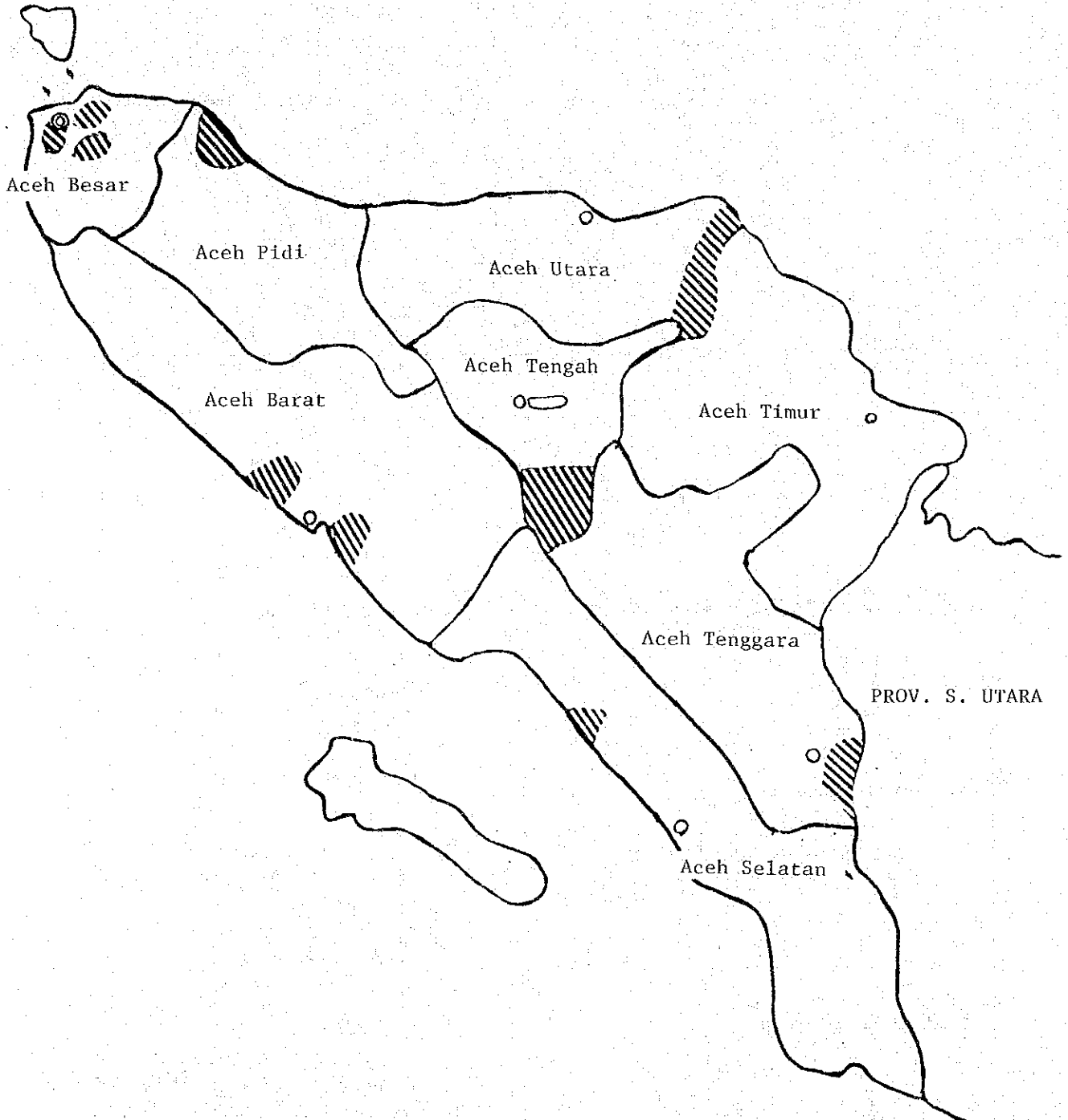


Figure 15. The distribution of bovine's positive reactors to brucella serological test up to 1982 (Aceh Province)

Figure 16. Monthly occurrence of Newcastle's disease over the five years

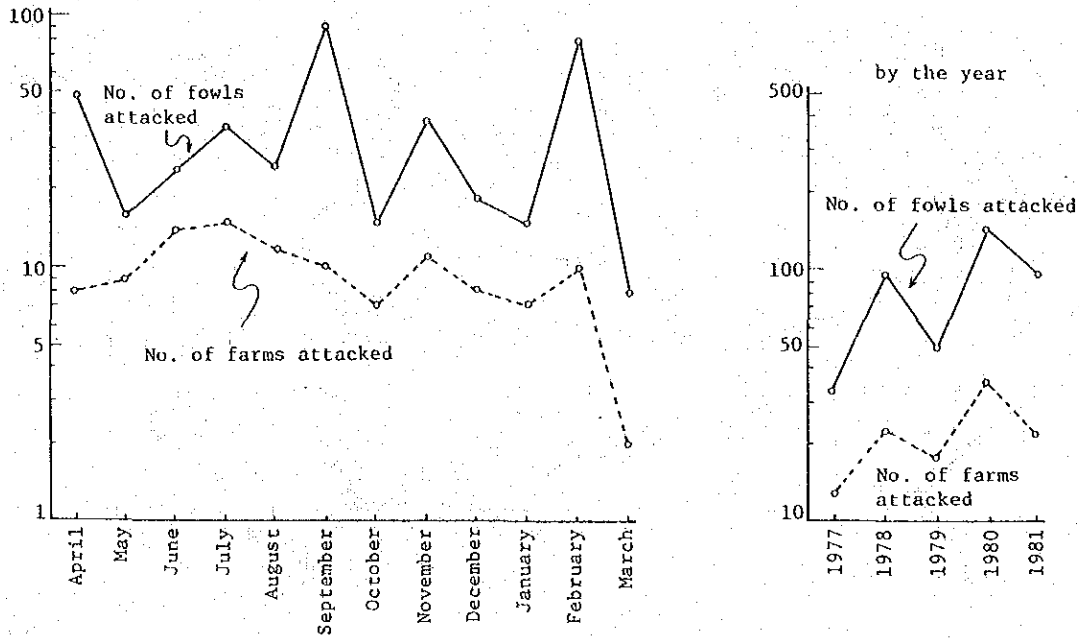


Figure 17. Monthly occurrence of coccidiosis over the five years

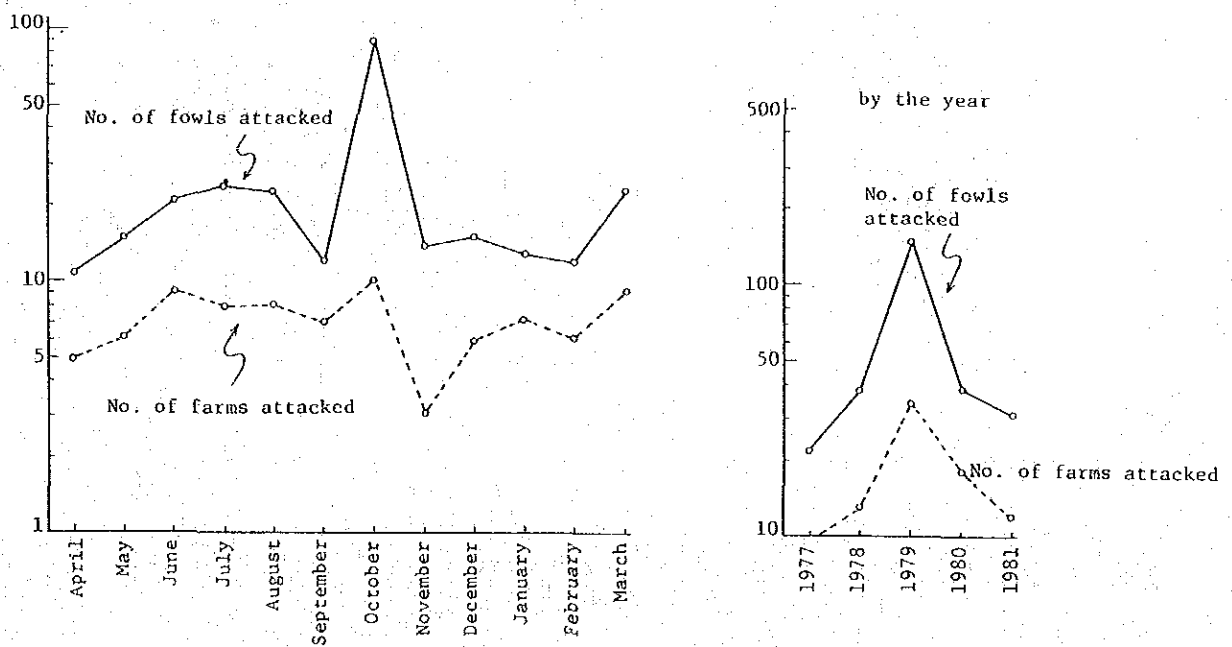


Figure 18. Examination Chart in the Bacteriology Section

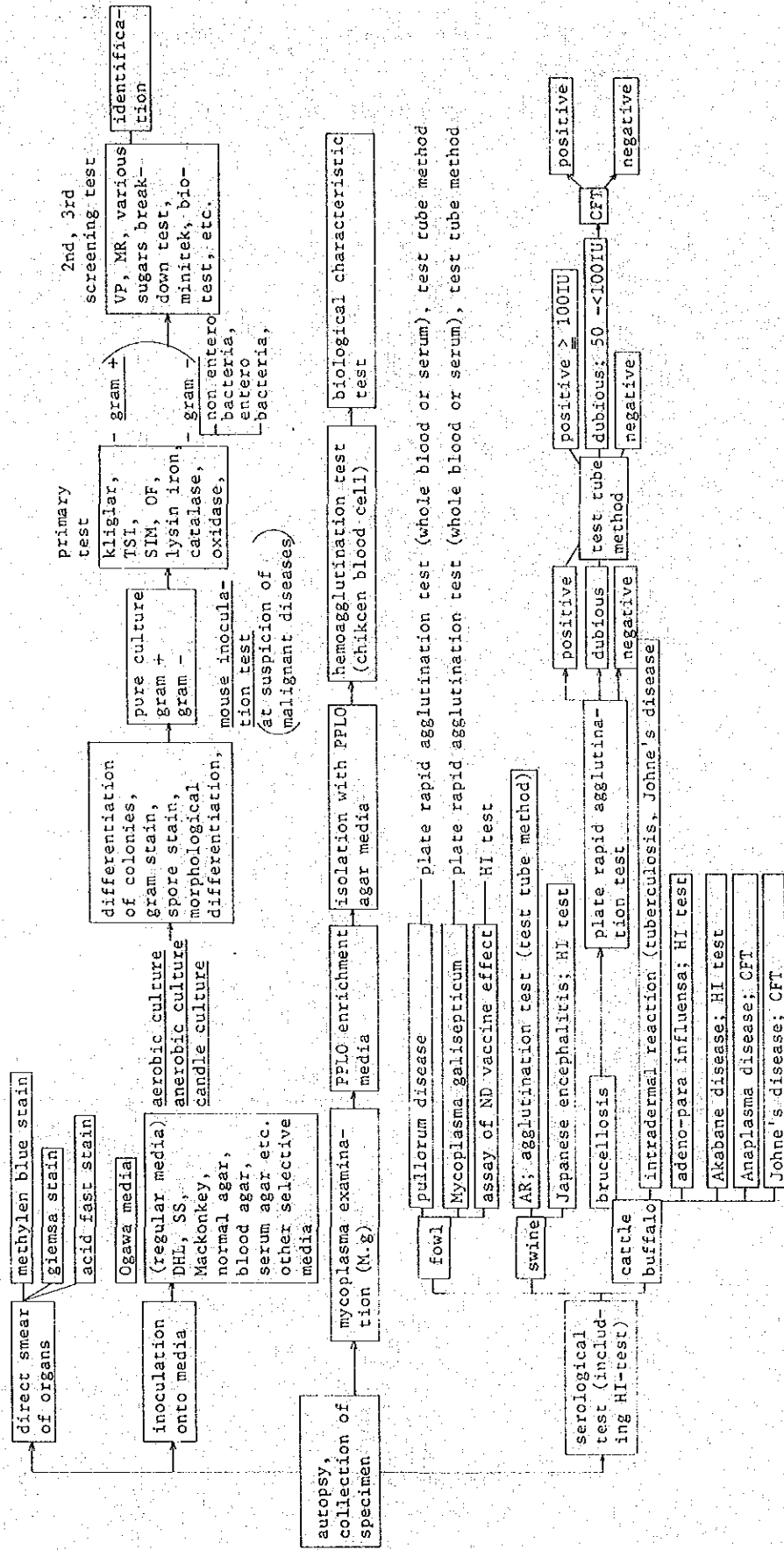


Figure 19. Examination Chart in the Virology Section

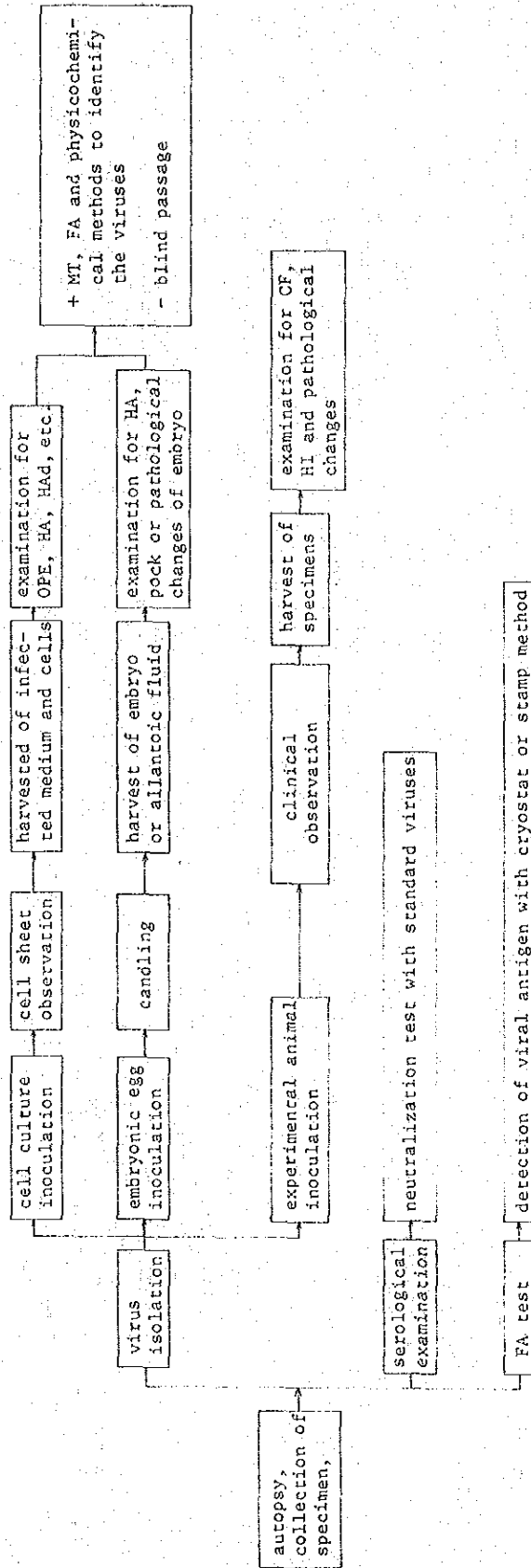
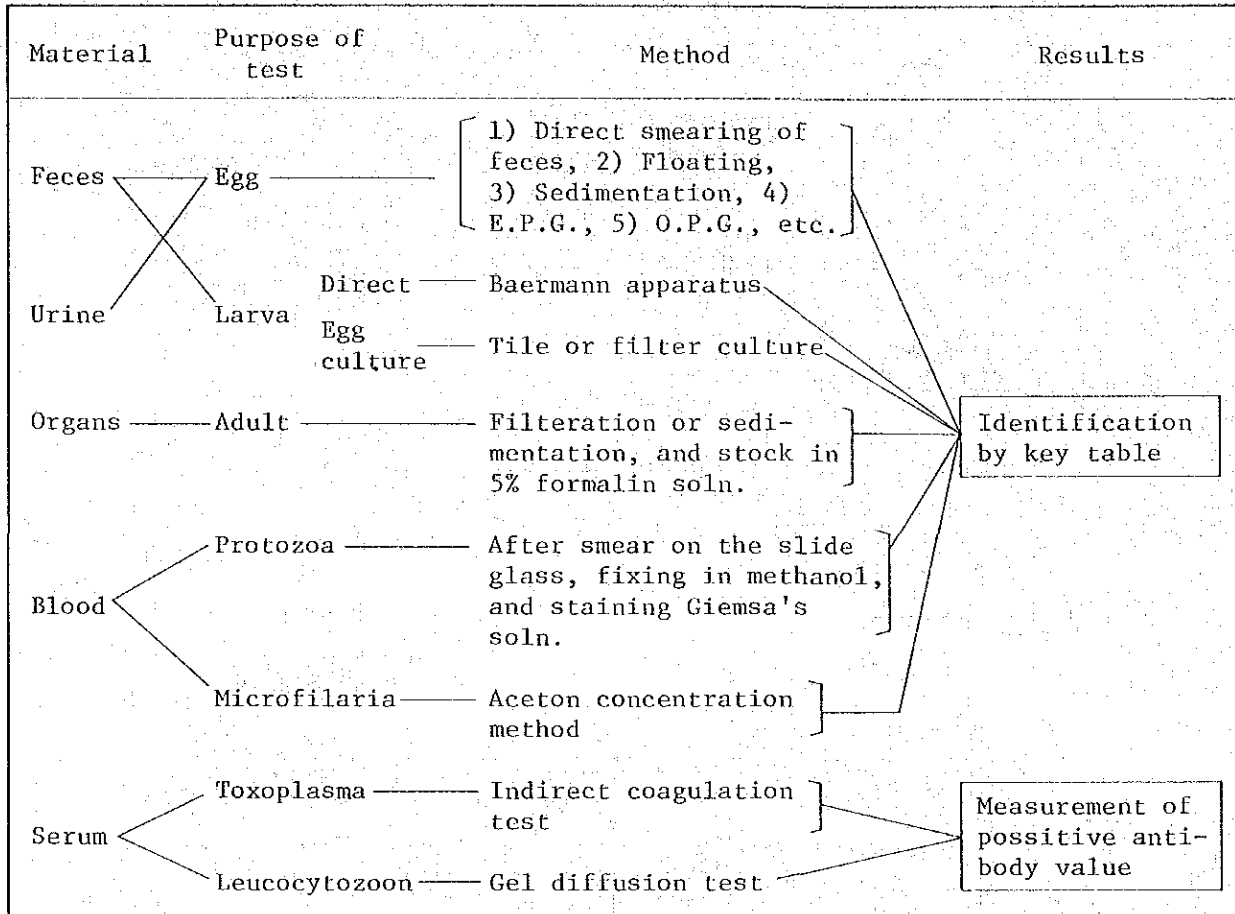


Figure 20. Examination chart in the parasitology section

1. Protozoa, Trematoda, Cestoda and Nematoda



2. Arthropoda

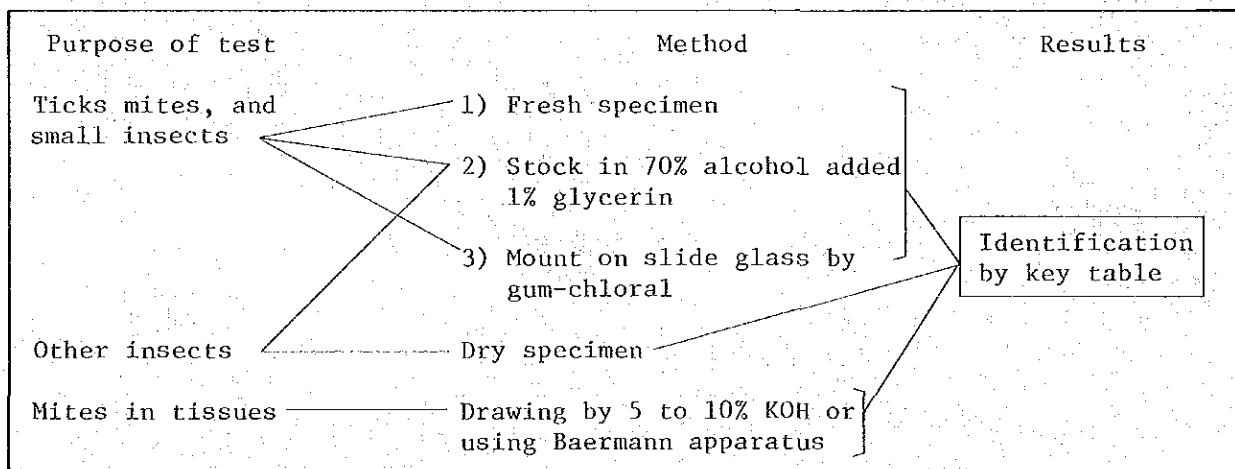


Figure 21 Examination Chart in the Pathology Section

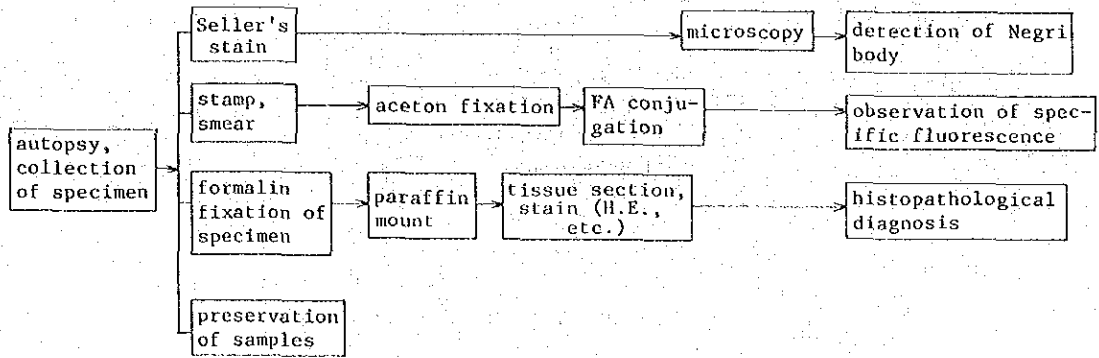
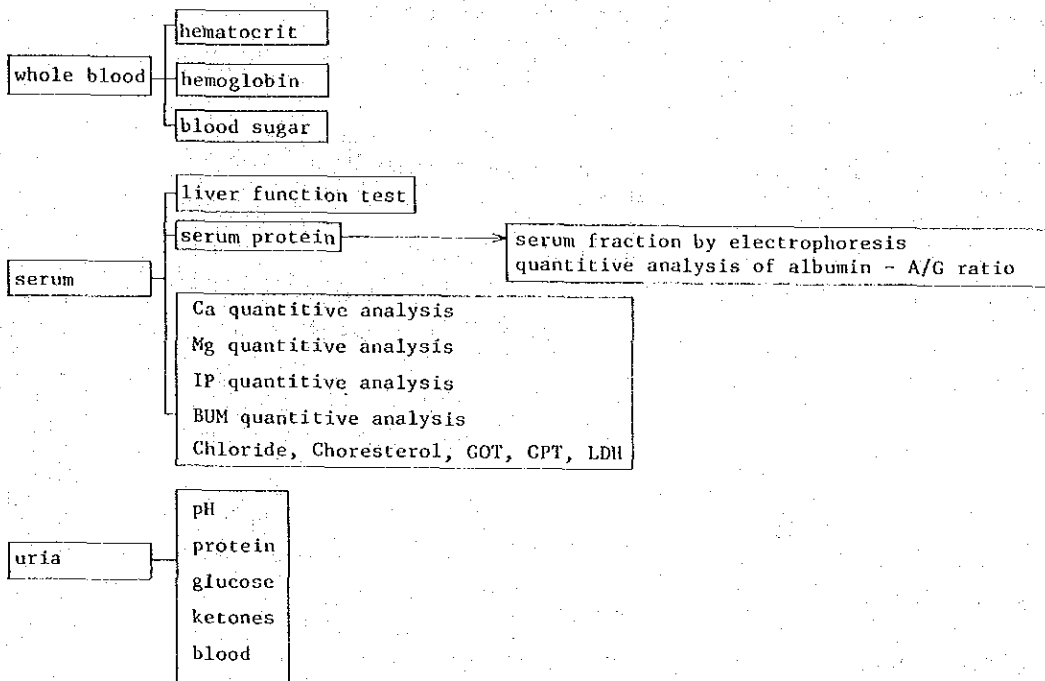


Figure 22 Examination Chart in the Biochemical Section



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