consisting largely of Gram-negative chromogens. The soil flora, however, appears to be more distinctive. There are more chromogenic bacteria than are normally found in soils, spore-forming bacteria are rare, and there is a large proportion of Gram-positive cocci. Attempts at isolating aerobic nitrogen-fixing bacteria were unsuccessful. Fungi are uncommon and *Streptomyces* have only been recovered from one site.

Ciliate protozoa identified include *Colpoda cucullus*, *Homalogastra setosa* and *Trichopelma sphagnetorum*, all typical soil forms[6,7], and a suctorian. Amœbæ are quite common, but testaceans have only been recovered from moss. Rotifers, tardigrades and nematodes were also present in some of the samples.

All these micro-organisms grew at room temperature, which in the case of the algae varied between 0° and 38° C. The bacteria grew both at 4° C. and at 25° C., but growth was slower at the lower temperature.

The presence of these micro-organisms, many of them typical of the soils of temperate regions, suggests the presence of an organic cycle comparable to that found in more developed soils and supports the view that the rock waste of this region may be properly referred to as soil.

Further details will be published elsewhere.

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VIROLOGY

Inactivation of Virus Hæmagglutinins by *para*-Chloromercuribenzoic Acid

It has been found that a number of chemical agents reacting with thiol groups can impair the infectivity of certain viruses while leaving others unaffected[1,2].

In the course of a systematic study, one of these compounds, *para*-chloromercuribenzoic acid, has been tested for its effect on a number of virus hæmagglutinins.

It was found that substances in the media used to suspend the viruses did not abolish the effect of the compound in the concentrations used. The reagent dissolved in distilled water was mixed with equal volumes of virus suspensions and held at room temperature for 1 hr. The mixture was then dialysed at 4° against 0·1 *M* phosphate buffer, *p*H 7·2, except in the case of the arbor viruses, when borate saline, *p*H 9·0, was used[3].

The dialysing fluid was changed at 4 hr. and the dialysis continued overnight. Doubling dilutions of the dialysates were made in plastic plates, 1 per cent cells added and allowed to settle at room temperature (occasionally 4° C.). Human cells were used for most tests, sheep cells for the *E.M.C.* group, goose cells for the arbor viruses and rhesus cells for adenovirus type 7.

Table 1

Group	Virus strain and type		Log$_2$ mean reduction of titre on treatment with parachloromercuribenzoic acid 10^{-3} *M*		10^{-4} *M*	
Myxo	Influenza *A*	W.S.	0	(4)*	0	(1)
		Mel.	0	(1)	0	(1)
	Influenza A_2	Iksha	0	(1)	0	(1)
		A/Eng/59	0	(1)	0	(1)
	Influenza *B*	Lee	0	(3)	0	(1)
	Parainfluenza I	Sendai	0	(4)	0	(1)
	Mumps		0	(2)	0	(1)
Adeno	Adeno type 7		>2·5	(4)	>7·5	(2)
	Adeno type 9		0	(5)	—	
	Simian virus 17		0	(3)	—	
Reo	*REO* type I		>4·4	(8)	>4	(1)
	REO type II		>1·1	(3)	>7	(1)
Entero	*ECHO* 7		>3·75	(2)	—	
	ECHO 11 prototype		>2	(1)	—	
	ECHO 11 "*U*"		2·8	(5)	>5	(1)
	ECHO 12		>1·75	(2)	—	
	Theiler's virus *GD* VII		>8	(1)	>4·5	(1)
E.M.C.	*E.M.C.*		>6	(1)	>9	(1)
	Columbia *SK*		>5	(1)	—	
Arbor	Group *A*	Semliki Forest	0	(2)	0	(1)
	Group *B*	West Nile	0	(3)	—	

* Number of tests performed. —, Not tested.

The compound tested had no effect on red cell receptors[4]. The other results are shown in Table 1.

There seems to be a clear-cut division between viruses in which there is a marked destruction of hæmagglutinating activity and others which are unaffected even by high concentrations. The myxoviruses and arbor viruses seem to be unaffected while the enteroviruses and reoviruses (previously called *ECHO* 10) are inactivated. This may be a reflexion of a fundamental difference of structure between these groups. However, it can be seen that within the adenovirus group the results are not consistent and so caution would be required in using this reaction as an aid in classification. Another point of interest is that the effect of the compound on the infectivity of a virus may be quite different from that on the hæmagglutinin, for the infectivity of many myxoviruses is destroyed by this treatment whereas the infectivity of *GD* VII is unchanged.

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Intranuclear Formation of Cytomegalic Inclusion Disease Virus

Human cytomegalic inclusion disease virus has been isolated in human fibroblast cultures and its cytopathogenic properties characterized by Smith[1], Rowe *et al.*[2], Weller[3], and Weller *et al.*[4]. The present communication deals with some appearances in the electron microscope. The strain used is the Kerr strain obtained from Dr. T. H. Weller which has been passaged in tissue culture about 20 times. The virus was grown in human embryonic skin-muscle fibro-