Little attention has been paid to the rôle that frogs might play in the epidemiology of Weil's disease. However even before the significance of the rat as carrier of leptospires was known, Hübener and Reiter (6), Uhlenhuth and Fromme (15) inoculated, without mentioning any further detail, frogs with virulent Weil-leptospires, but they either were not able to establish any pathogenic activity or when the frogs had died no leptospires could be detected in the organs. These authors thus found frogs to be "refraktär gegen die Krankheit". Pettit (10) writes with respect to this "natural immunity:""Rana esculenta est capable d'altérer légèrement les Spirochètes". Uhlenhuth and Fromme detected sometimes in the intestine of frogs spirochaetes of the Weil-type.

As merely sparse data have been gathered a further extension of our knowledge of this matter is very desirable; this has been attempted at in the following.

I. THE PRESENCE OF ANTIBODIES WITH RESPECT TO PATHOGENIC AND APATHOGENIC LEPTOSPIRAE IN THE SERUM.

The blood of frogs, caught in different ditches, in different parts of our country and on different moments, was obtained by withdrawing it under ether anaesthetic from the big skin- and foreleg veins and from the heart. The tests for agglutinins and lysins, which in the following will serve as a measure for the degree of immunity, were made as is customary in the diagnostic of Weil's disease, except that here also 1 : 2, 1 : 4, and 1 : 8 serum dilutions were examined. When the end titre was feebly positive it was
recorded as positive. The tests were made with the following pathogenic strains: the incomplete (strain Coppé or Kantorowicz) and complete (strain Wijnberg) biotype of *Leptospira icterohaemorrhagiae*, with *L. canicola* (strain Polly), *L. grippotyphosa* (strain Andaman) and with *L. sejrö* (strain Sejrö). The separate sera could not be agglutinated with all these strains, the research having been started already many years ago when all the above species of Leptospira and the existence of biotypes of a single species were not known as yet. Moreover we came into possession of one definite strain at a later date and the quantity of serum derived from one frog was often insufficient for agglutination with all of the strains. Besides these strains, 10 strains of the apathogenic saprophytic *L. biflexa* (*pseudoicterogenes*), isolated from tap-water or ditch-water, were tested. The result is presented in the tables I and II. The tests recorded in table I bear on 99 specimens of *Rana fusca* and 10 specimens of *Rana esculenta*. The numbers after the „+” indicate *R. esculenta*. Table II bears on 21 specimens of *Rana fusca*.

### Table I.

<table>
<thead>
<tr>
<th>Titer</th>
<th>Coppée Kantorowicz</th>
<th>Wijnberg</th>
<th>Polly</th>
<th>Andaman</th>
<th>Sejrö</th>
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<td>1 + 1</td>
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<td>12 + 7</td>
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<td>2</td>
<td>0</td>
<td>0 + 1</td>
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<tr>
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<td>11 + 3</td>
<td>4 + 2</td>
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<tr>
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<td>2 + 2</td>
<td>11 + 2</td>
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</tr>
<tr>
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<td>0 + 2</td>
<td>—</td>
</tr>
<tr>
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### Table II.

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