

Mechanism of occurrence of "Ikenotaira"-pond appear from time to time in the Misakubo town, Shizuoka Prefecture

TAKAHASHI, Yukaya^{1*}, KONO, Tadashi²

¹Graduate School of Geo-environmental Science,Rissho University, ²Faculty of Geo-environmental Science,Rissho University

1.Introduction

There is a pond told to appear in a cycle of about seven years in the basin located in 654m above sea level of Misakubo Town, Hamamatsu City, Shizuoka Prefecture.

It is a basin without water usually and covered with artificial plantations, such as a Japan cedar and a cypress.

It is a lot of rain checked before the pond appear.

Sugimori (2001) etc. reported geological features and rain influence the groundwater level and appear pond.

Moreover, although it hands down that it had appeared 400 years or more before, it is not known that it is detailed.

The reason for clear generating conditions or mechanism not being solved but appearing periodically now, still now of this pond is also still unknown.

In this study, it aimed at solving an appearance mechanism based on the natural conditions of precipitation or a spot.

This time, we report the result of having performed the lake basin survey in the field and the water quality analysis in July and December,2012.

2. Research Region

Ikenotaira pond is in the basin of the place which went down about 200m the Mt.Kamenoko peak in Oryoke, Misakubo Town.

The path has been in the state near ruin road since the Sakuma Dam was constructed.

The path has many collapsed parts and it can observe that the whole mountain is a landslide place.

3. Investigation / Research Technique

We ran the basin survey, geological features survey using soil auger, sampled the spring water and stream water.

We measured electrical conductivity, ORP, pH, and water temperature there.

We run ingredients of inorganic ion analysis of brought sampling and the pond water using ion chromatography.

4. Result and Consideration

As a result of the lake basin survey near the 654 m above sea level and showing a depth contour, the maximum length of this pond is 130m, the maximum breadth of 50m, the circumferences is 130m, the area is 4325m², and the capacity is 11375m³.

As a result of water quality analysis, the sample(2010) became clear that same as rain because each mass of dissolved ingredients are poor.

It compares the sampling go down 100m from the water quality analysis of pond and the sampling(2010), showed that each mass of dissolved ingredients are higher and especially the value of Ca⁺ is 6.73ml/g.

5. Future task

We constructed the automatic water level gauge in basin and rainwater sampler and tipping bucket rain gauge in Misakubo Town Hall for the occurrence mechanism elucidation.

It is a plan to estimate the cultivation source using technique of the isotope hydrology.

Keywords: Ikenotaira, lake basin, water quality, hydrology

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