Notes on *Gyromitra esculenta* Fr.

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Since my article on the subject "Mycophagy" was published in the Proceedings of the Indiana Academy of Science, volume 61, 1952, more information has been obtained regarding the toxic qualities of *G. esculenta*. I received a letter dated November 18, 1952, from Dr. C. M. Christensen, Professor of Plant Pathology, and Mycologist of the University of Minnesota, and I quote from his letter:

"I thought you might be interested in knowing that five people near Pine River, Minnesota, were killed by eating this mushroom (Gyromitra esculenta) in 1938. The mycologist of our division identified the mushrooms so there is not much doubt about their identity. I have never counted up the cases reported more or less annually in the pre-war German popular mycology journal 'Zeitschrift fur Pilzkunde,' but illness of various degrees of severity and also cases of fatal poisoning unquestionably due to eating *G. esculenta* were reported in it nearly every spring. Gussow & Odell, p. 235 state authentic cases are known of sickness and even fatal results following the eating of this species. Seaver, in his North American Cup Fungi (Operculates) 1942 edition, p. 27 states in regard to this fungus 'Some mycologists claim to have eaten it without the slightest discomfort, but if used at all, one should proceed very cautiously.' I certainly would not want to recommend as choice eating any fungus that has been known to kill as many as *Gyromitra esculenta* has. Sure, it is eaten by the carload, but that is small satisfaction to those who have been poisoned by it."

Kauffman reports numerous cases of poisoning from eating this species and he quotes Tolbert as saying that there are records of 160 cases of poisoning from this cause. Kauffman also states that this species is common around Port Huron and is eagerly sought for and sometimes sold on the market.

Although many people, including myself, have eaten *G. esculenta* with impunity; since the evidence is overwhelming that this species has caused the death of many people, it would seem to be the part of wisdom to either leave this mushroom alone or to test it carefully as I did. I ate a well cooked piece about the size of a quarter, and then waited until the next day when I ate a piece about the size of a dollar; then a larger piece was eaten the third day. Since there was no unfavorable reaction, I ate half of the mushroom, and have eaten many more since that time.

There are many forms of this mushroom. Dr. Fred J. Seaver describes *Elvella infula* Schaeff, which he terms synonomous with *G. esculenta*. This is a saddle-shaped mushroom that grows on wood and which he says is found in the summer and fall. Of course, this is not the same *G. esculenta* that grows here only in the spring, which never grows on wood and is not saddle-shaped.

Dr. Alexander H. Smith, mycologist of the University of Michigan, shows a photograph of *Helvella esculenta*, which he terms synonomous with *G. esculenta*, on reel No. 1 of his beautiful photographs of "Mushrooms in Their Natural Habitats." This photo shows the gyrose form with two lateral lobes. This gyrose form is probably the most common form of this mushroom.

Also there is the globular form which I have eaten and enjoyed very much. A good description of this form is given by Dr. Rene Pomerleau, Professor of Plant Pathology and Mycology at Lavel University, Montreal. He describes *G. esculenta* as globular, irregularly folded and convoluted like a brain. He says he has eaten this species many times but it is to be used with caution. His description agrees with what I have found to be the edible *G. esculenta* but my experience, and that of many others does not necessarily mean that it is a safe species for everybody to eat.

Could it be that other forms are more dangerous than the globose form?