

Part 2:

1. Yesterday's Limestone Layer
2. FOB(Fukutoku Okano-Ba) pumice
3. Volcanic ash (Garden soil) observation

Khao Pubpa Limestone Layer

1. A different type of limestone
2. Turbidite limestone
3. What is the environment



Normal Limestone vs. Yesterday's



Loei Last Week







Oslo, Norway 2008

Lagoon Sediments? Turbidite?

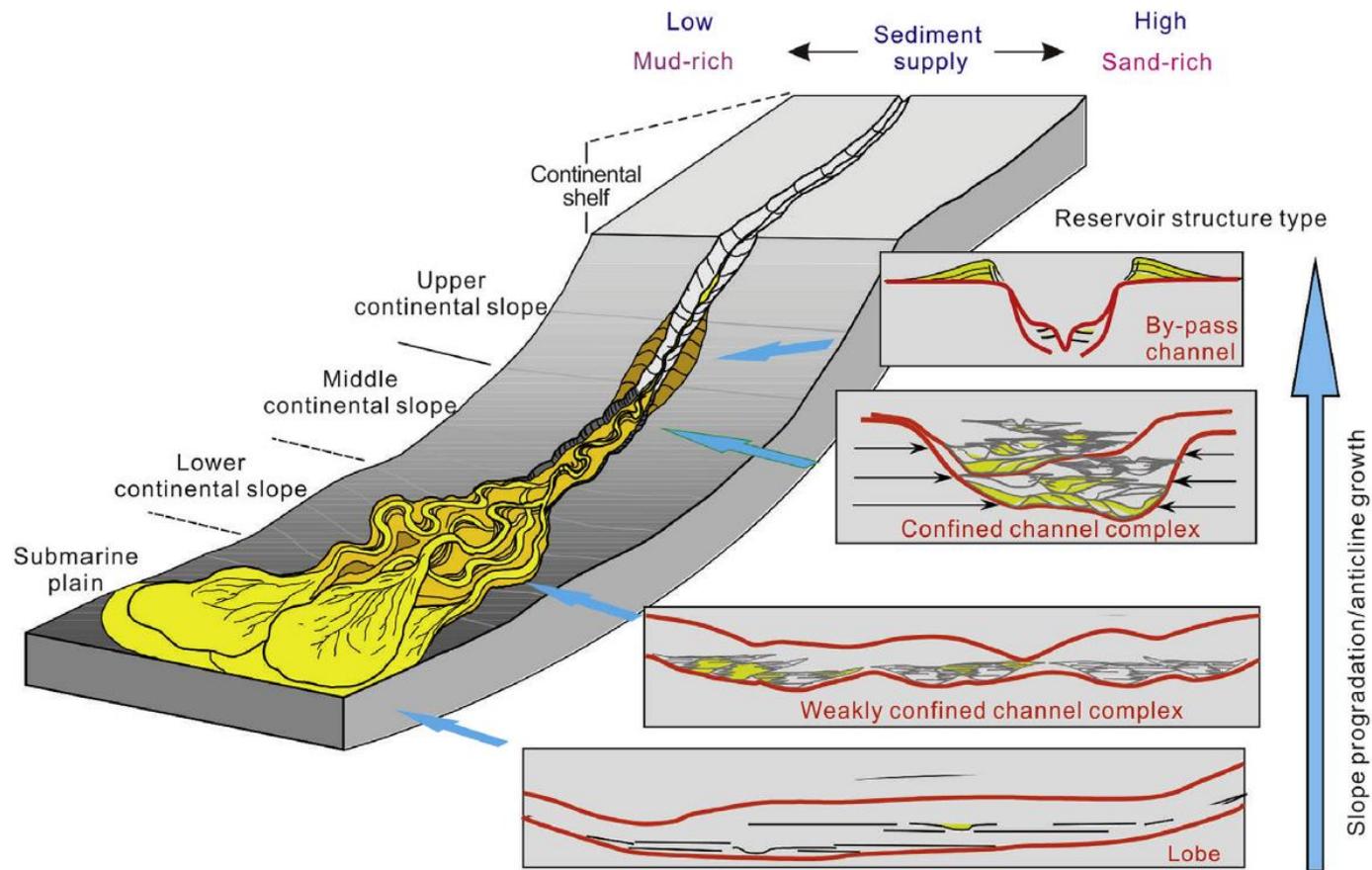


Fig. 9. Sedimentary model of turbidite fan showing that the incised valleys and by-pass channels are developed in the continental slope and the upper slope; the confined channel complexes and weakly confined channel complexes are developed in the middle slope and the lower slope; and the lobes are developed in the submarine plain (according to ENI with slightly modification).

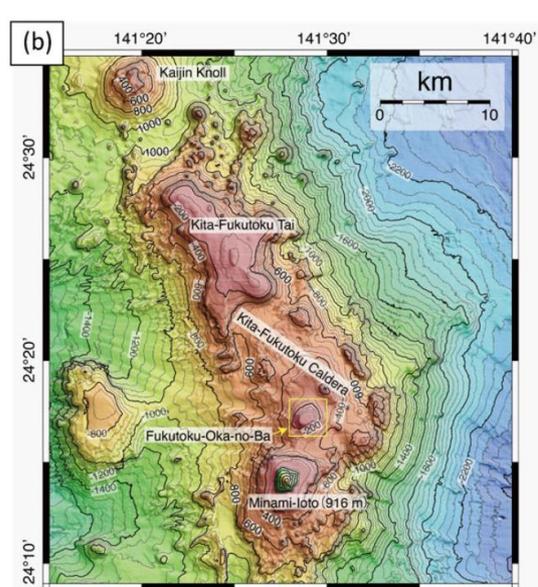
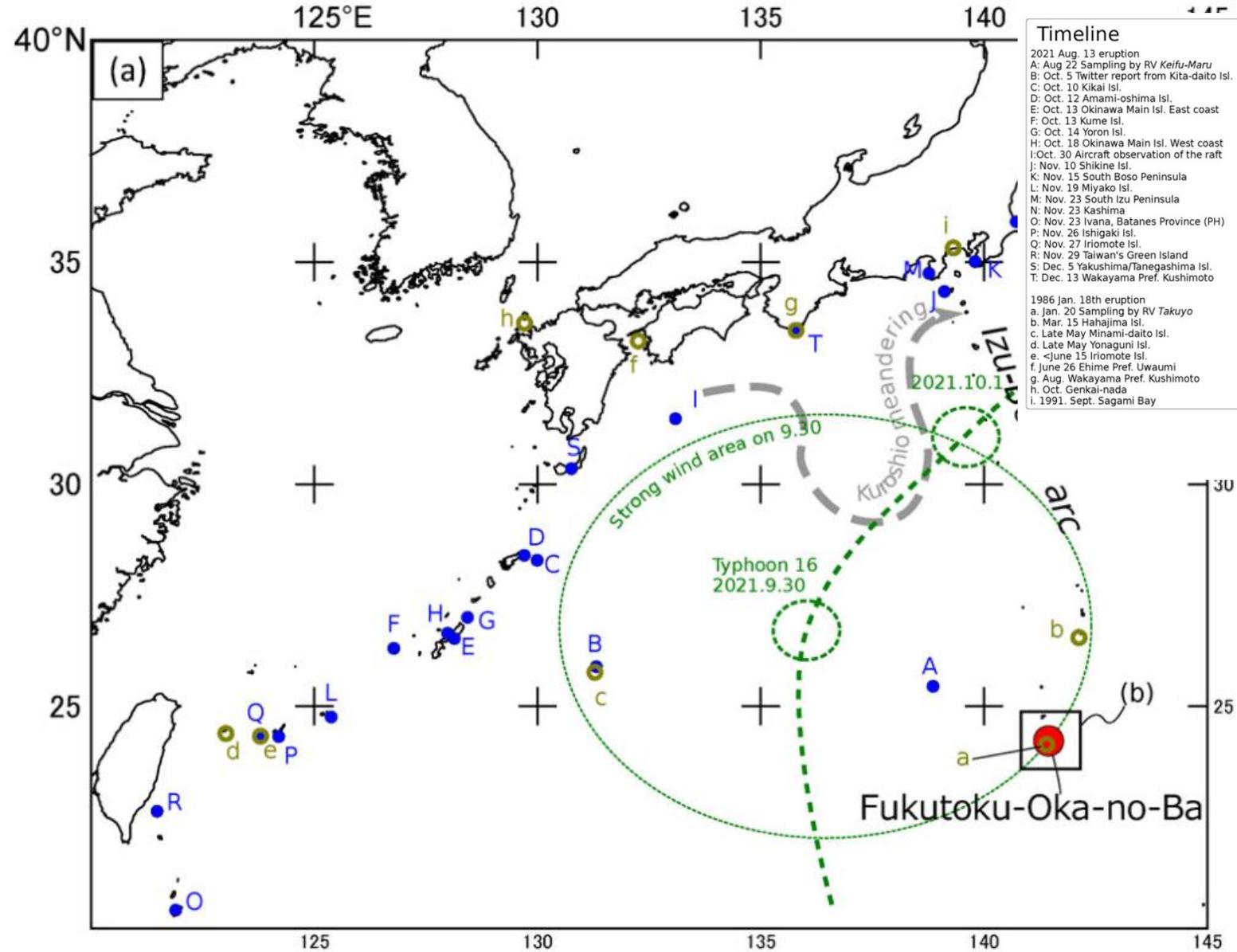
Turb



Kada, Japan 2001: Sandstone & Mudstone

pumices travel with ocean currents,
and arrived at east Asia beaches.

Particularly, In Japan, the impact of these pumices is shocking! Many sight-seeing spots are contaminated by dark-colored pumices, especially in Okinawa. Also, the fishing boat can not go out from their harbors.



Yoshida et.al.2021

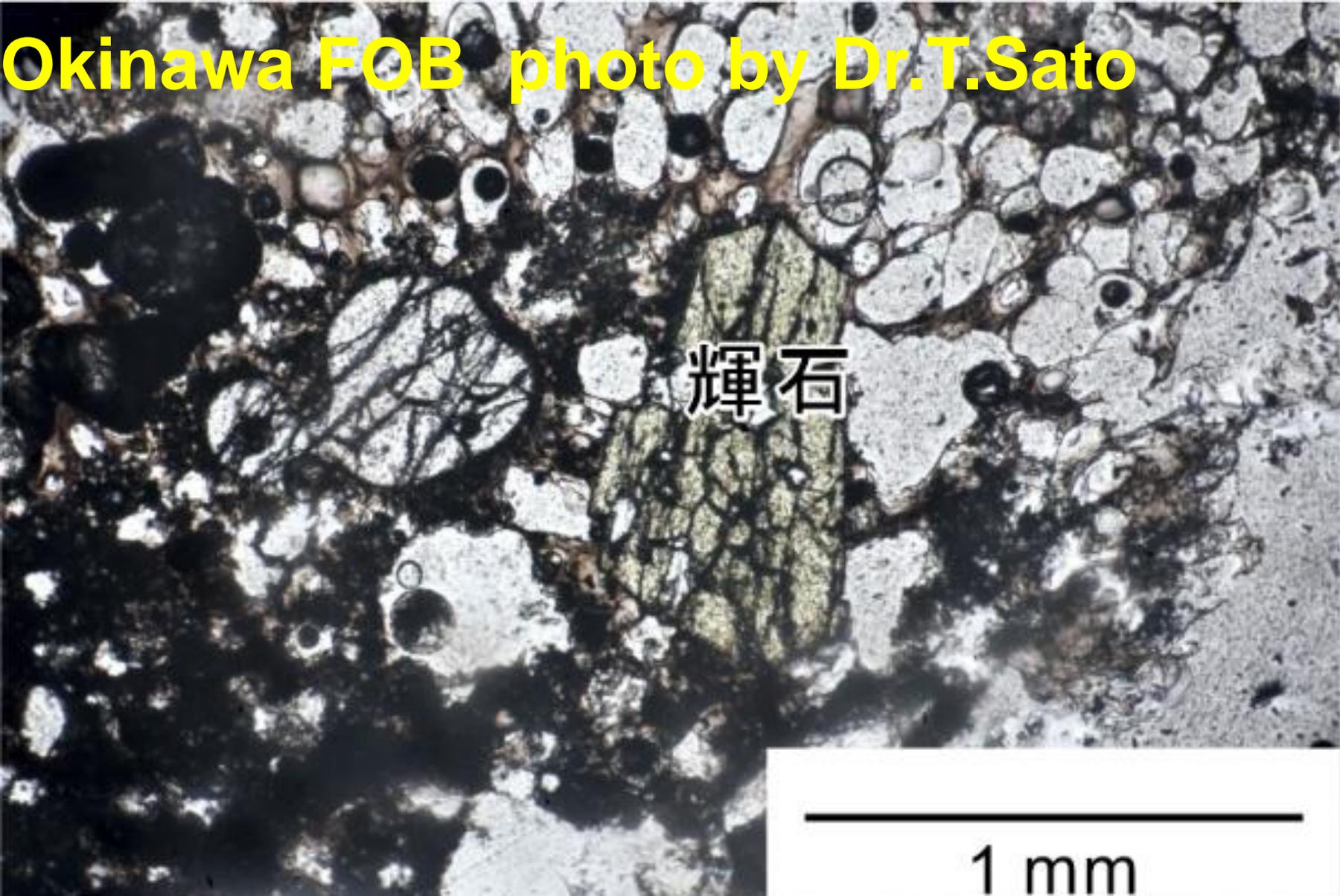


Okinawa, Japan 2021 Oct. sampled by C. Murata

Okinawa FOB photo by Dr.T.Sato

輝石

1 mm

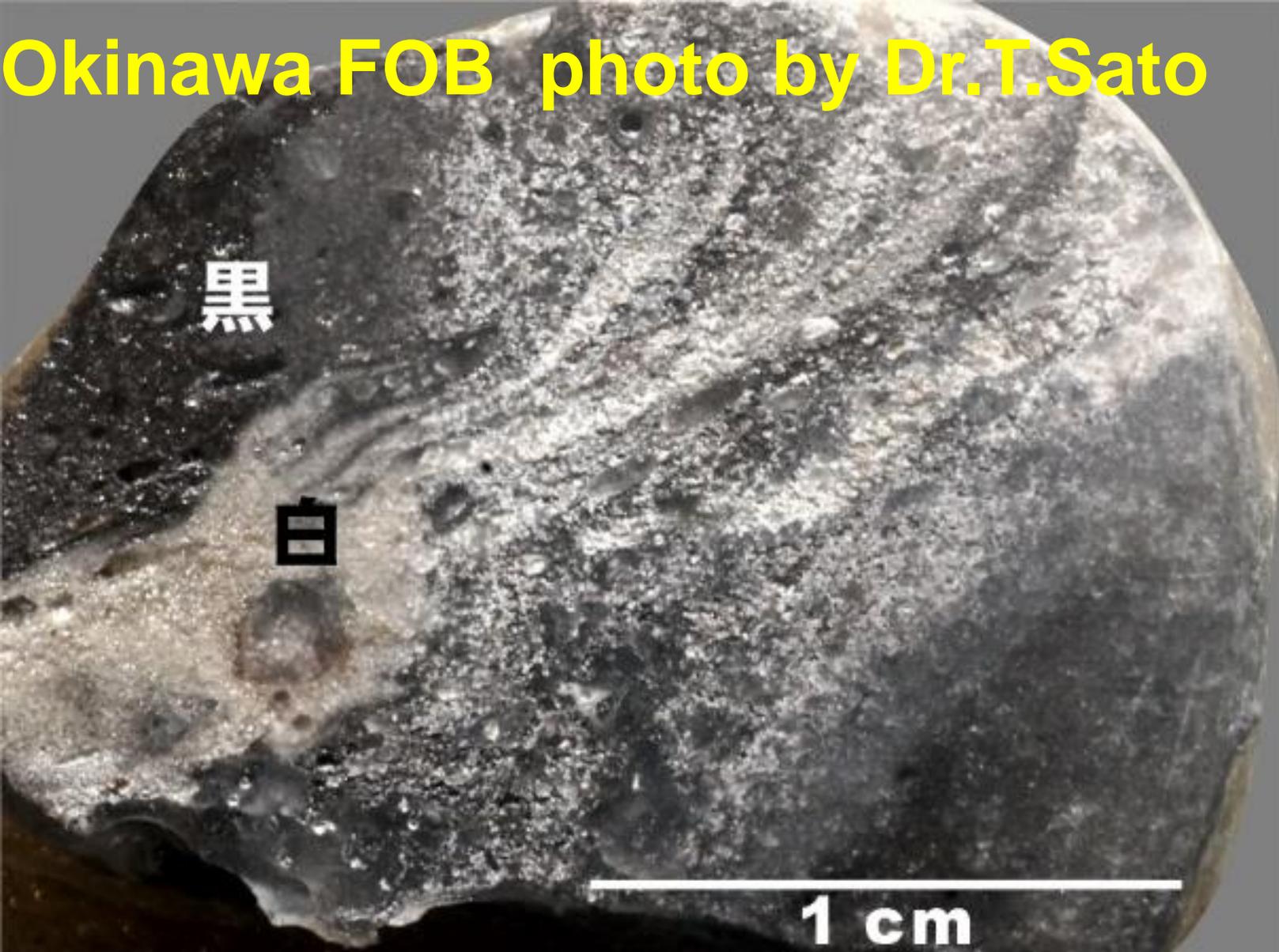


Okinawa FOB photo by Dr.T.Sato

黒

白

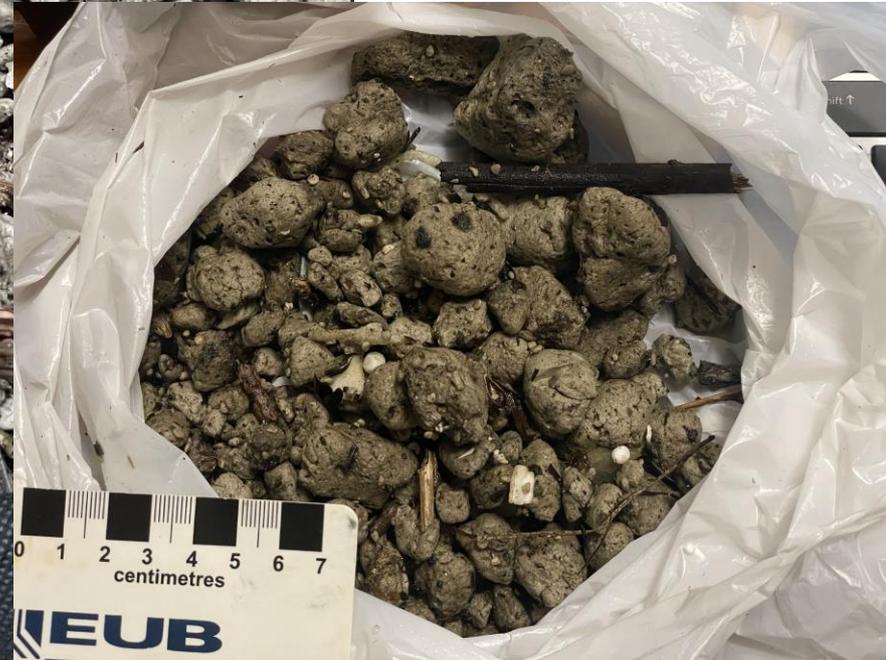
1 cm

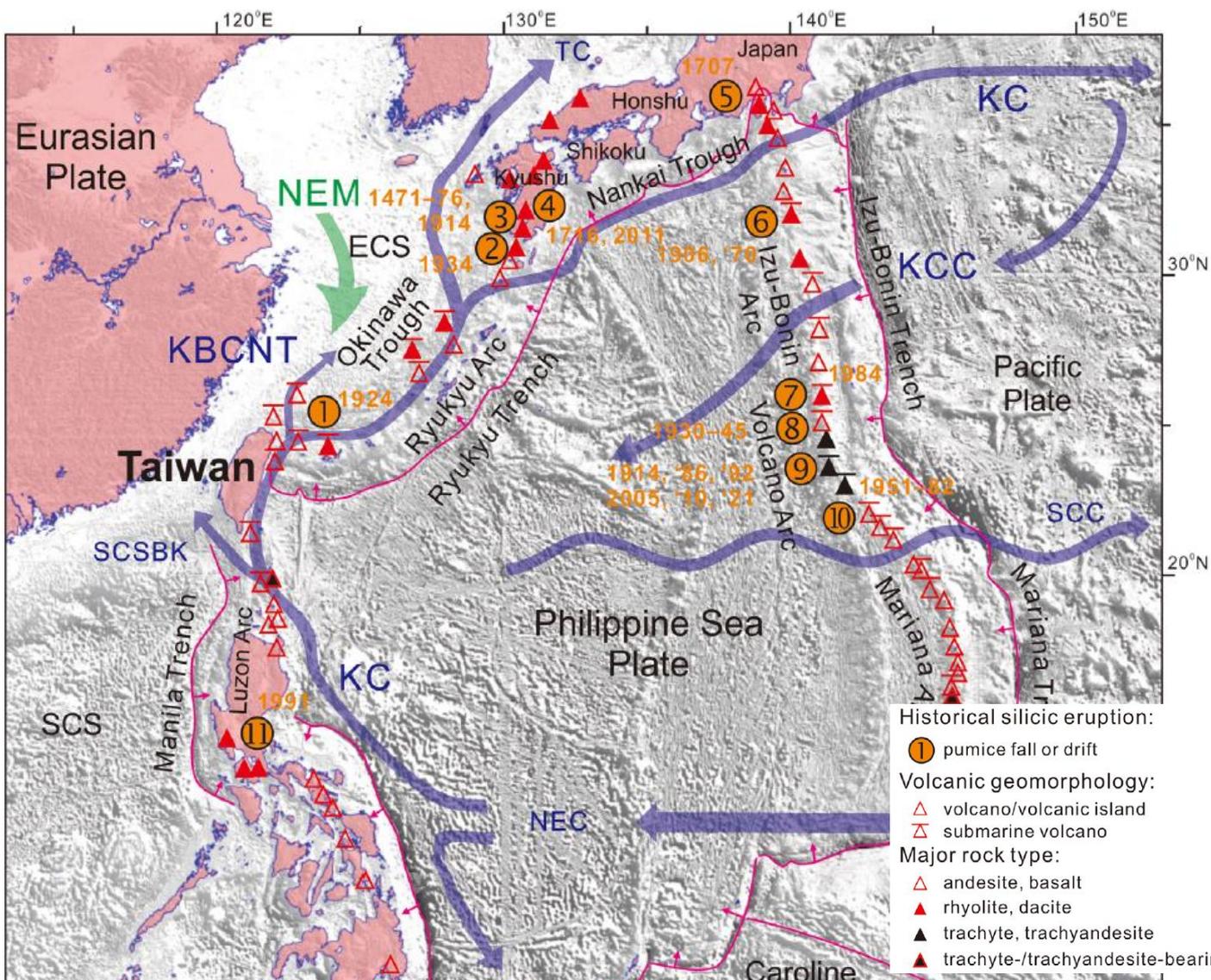


Nakong Si Thammarat FOB by Kung Sensei



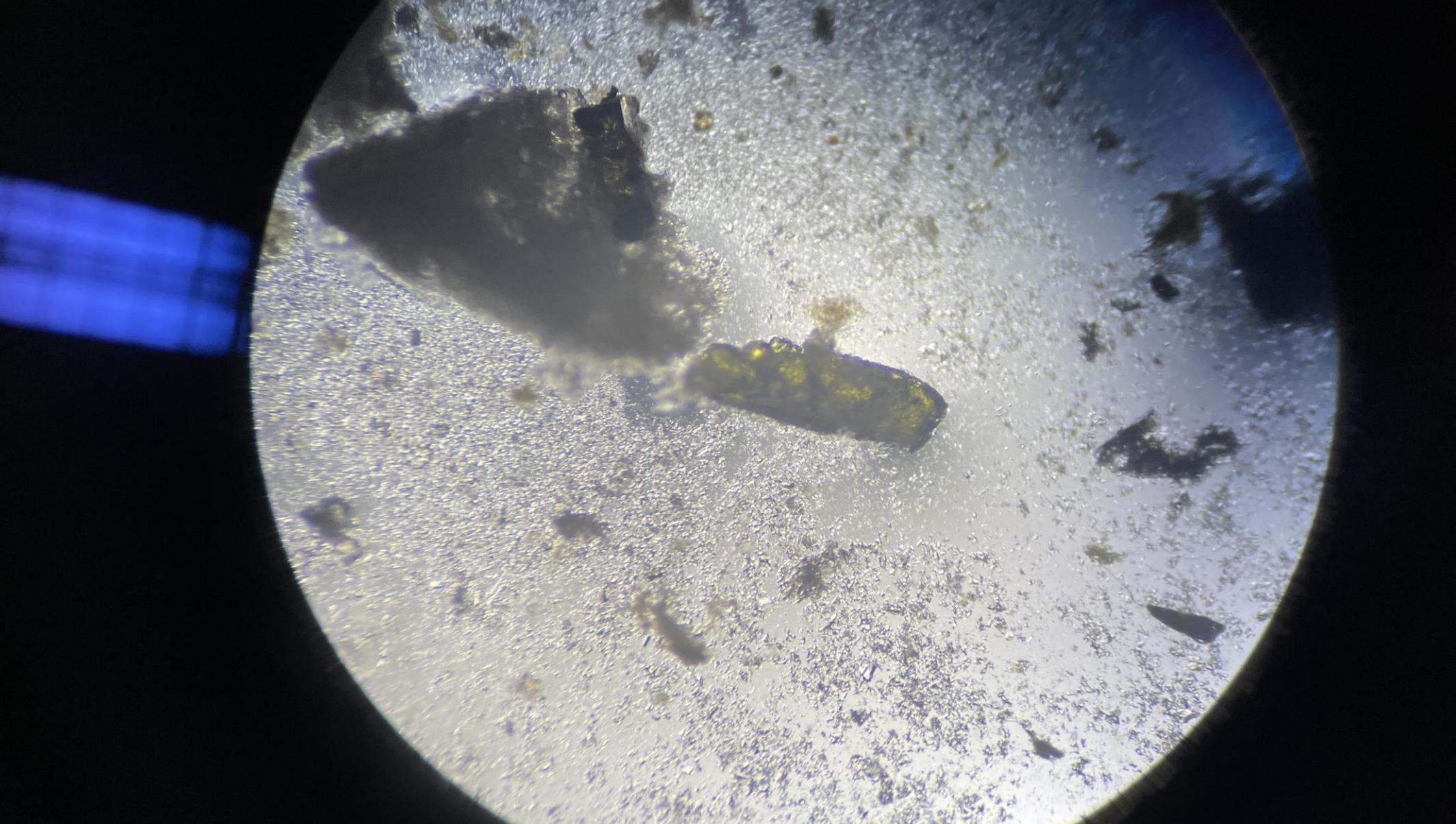
Nakong Si Thammarat FOB by Y.Okamoto





Neng-Ti Yu et.al.2022

Fig. 1. Tectonic plates, active volcanoes, and surface currents in the western Pacific region. Rock types, geomorphologies, and eruptions of the volcanoes are based on Global Volcanism Program (2013) and Geological Survey of Japan (2021). Surface currents are modified from Kawai (1991) and Wang and Qev (2016).



New study about FOB

A proposal for PCSHS NST from my friend

Dr.Sato: volcanic geologist

Chemical or petrological analysis of Thailand FOB
was already published K.Yoshida (2022)

However, the assessment of the impact, of this
pumices drift at Thailand, on people and the
environment has not yet been made.

So he strongly wants to study this issue with
PCSHS NST teachers!

Volcanic ash (Garden soil) observation



Lazada ค้นหาในลาซาด้า

เก่งใน inspired | ชุดหน้าจ้อ oppo a74 | กาแฟสด boncafe | ยางติดบั้งโค่น | เคสหูwainova 8i

หมวดหมู่ ▾ LazMall

อุปกรณ์ภายนอกและตกแต่งสวน > สนามหญ้าและสวน > ดิน, ปุ๋ย และอุปกรณ์เพาะชำ > AKADAMA ดินญี่ปุ่น อะคาตามะ ดินบอนไซ วัสดุปลูก ไรยหน้า

ดินญี่ปุ่น AKADAMA

Size 1-3mm. Size 3-6mm.

500g.

ส่งไว!
จาก กทม.

49.-

ราคาแนะนำ

AKADAMA ดินญี่ปุ่น อะคาตามะ ดินบอนไซ วัสดุปลูก ไรยหน้า

★★★★★ 25 คะแนน

แบรนด์: No Brand | เห็นเต็ม สนามหญ้าและสวน จาก No Brand in TH

฿43.00
จะเริ่มภายใน 2 วัน 18:17:39

฿45.00

12.12 เซลใหญ่
ส่งท้ายปี

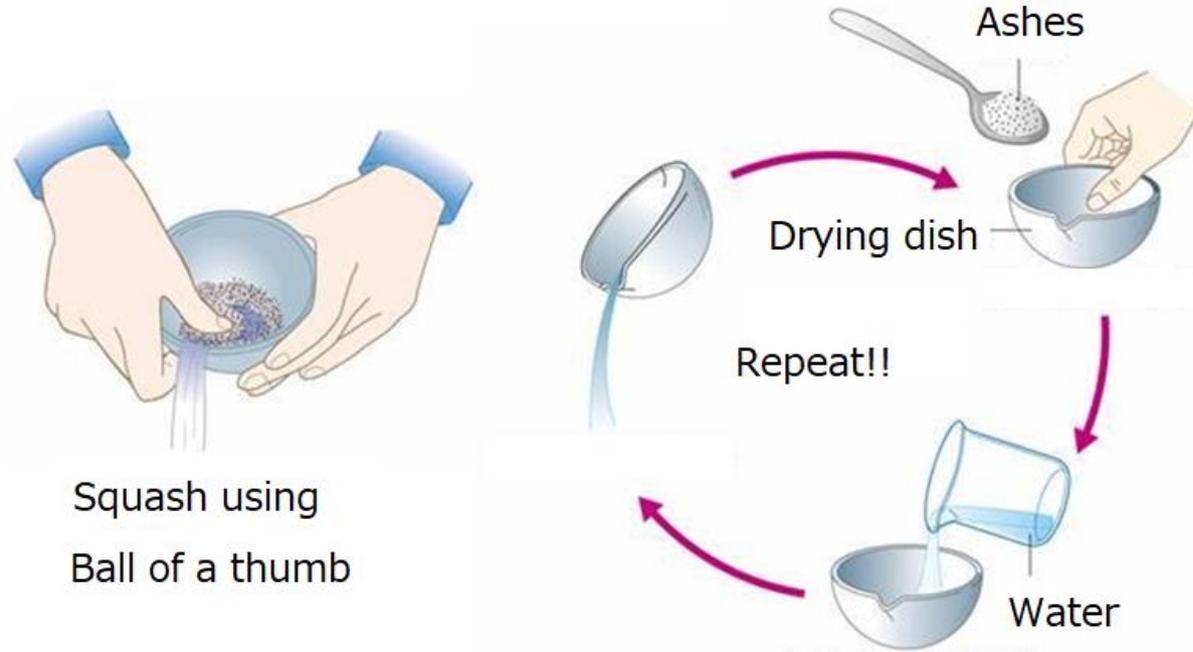
ขนาด เล็ก(1-3mm.) 500g.

เล็ก(1-3mm.) 500g. กลาง(3-6mm.) 500g. เล็ก(1-3mm.) 2kg.

กลาง(3-6mm.) 2kg.

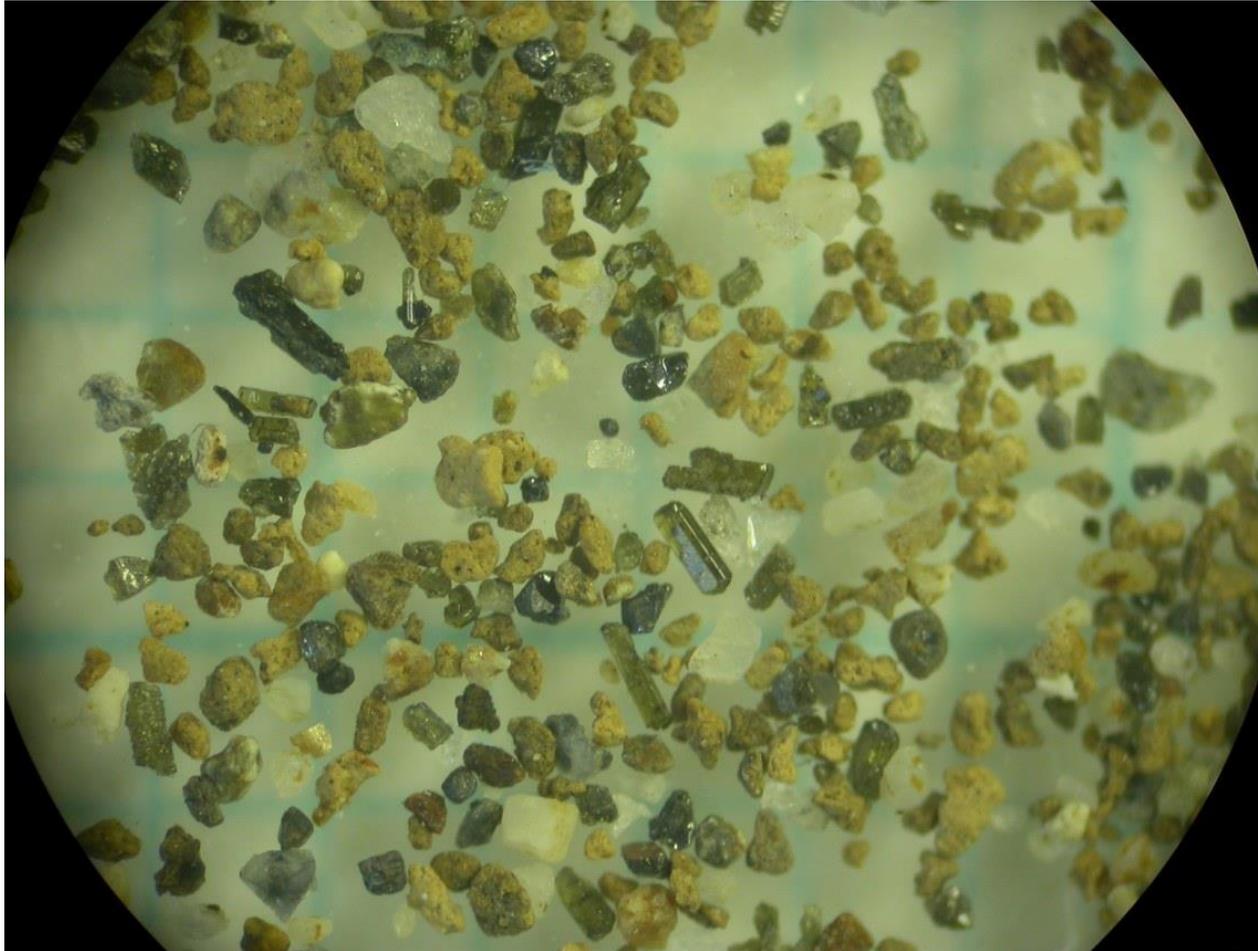
Wash up dirty soils

Preparation of volcanic ashes and soils for microscope observation

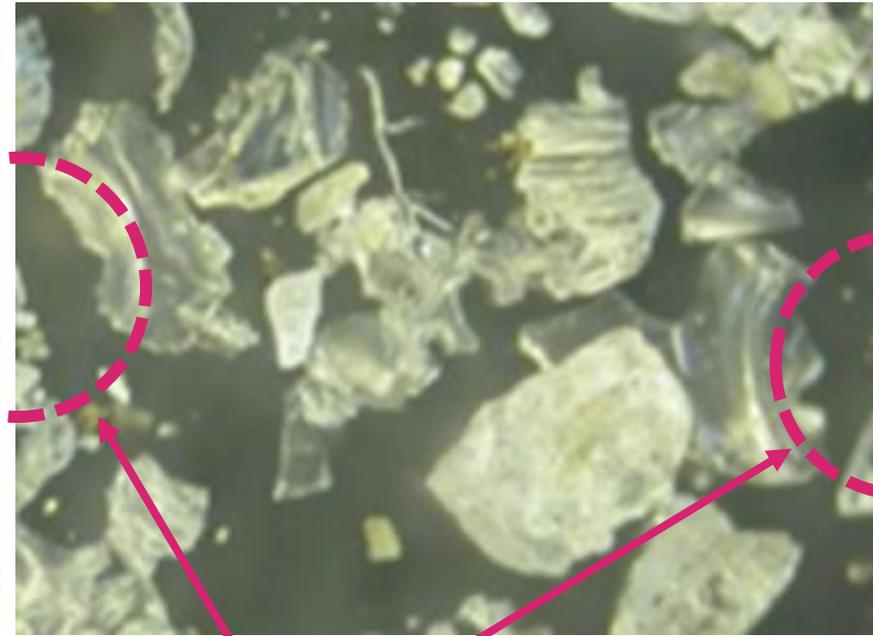
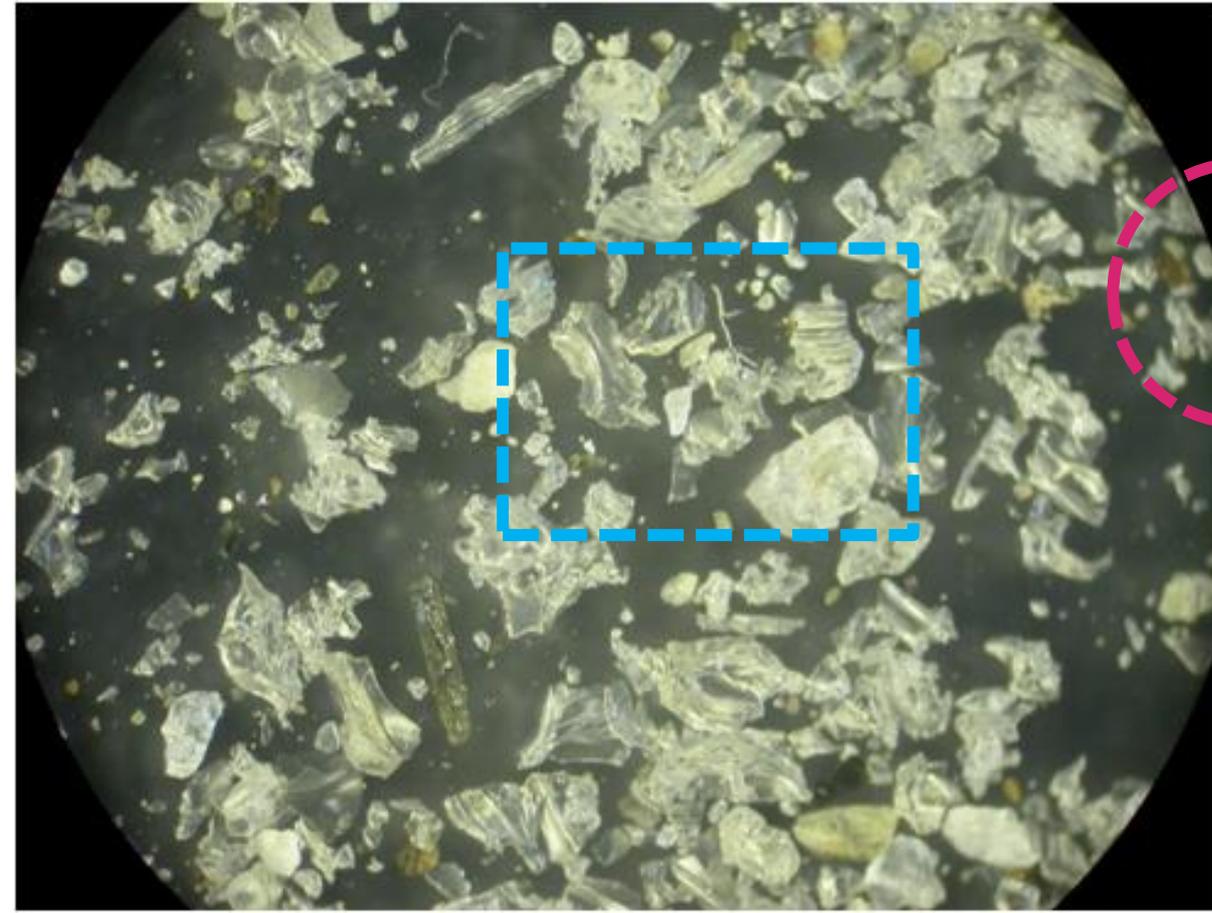


10 min break

<Akatama-tsuchi: Kanto Roam> purchased from DIY shop as a plant soil Hyperion augite, hornblende, magnetite, rock fragments (background blueline: 1mm span, view area 8mm)



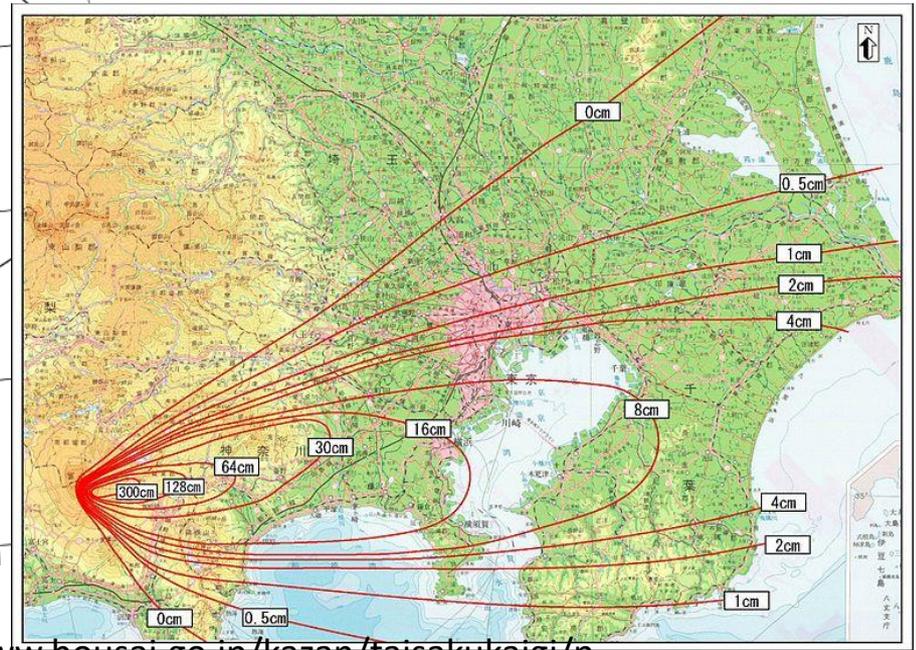
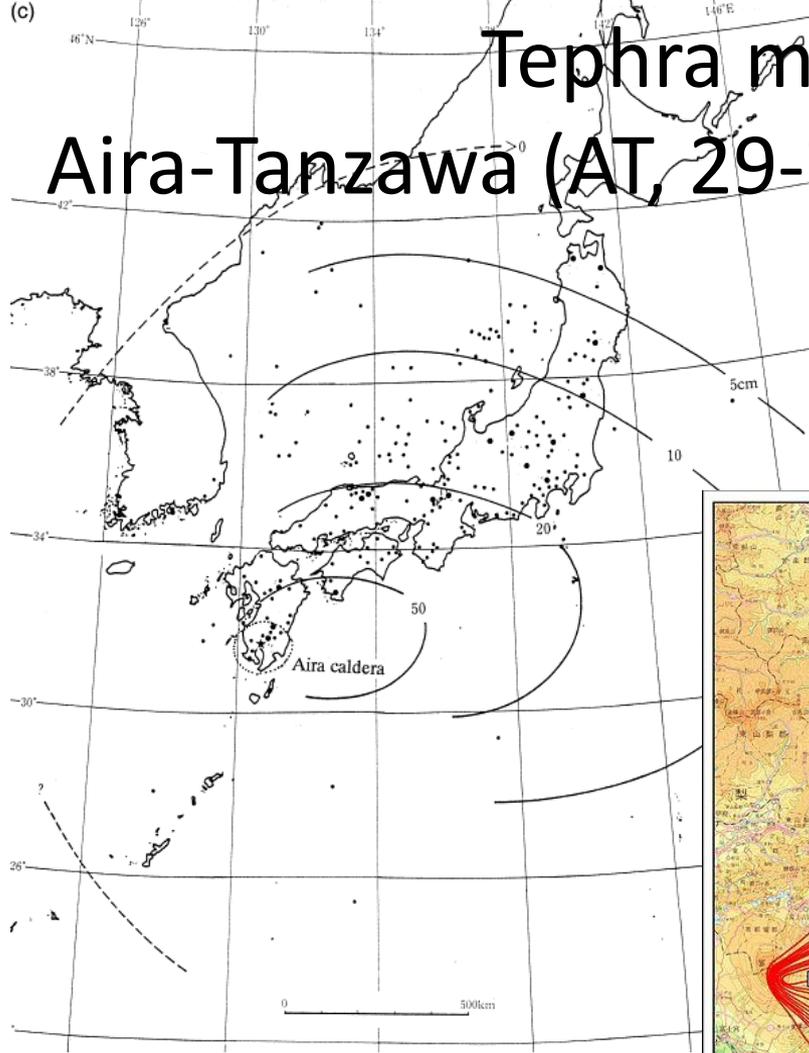
<Ara-Tanzawa volcanic ash: **AT volcanic ash**> in Mt. Aso Kumamoto Pref. Japan (same scale) Bubble walls of **volcanic glass** are significant. The expansion of this ash covers the large area of western Japan and Honsyu even northern end of Amomori. Important key bed of 2.5Ma. and is called a typical distal tephra.



Air bubble ->
"Bubble wall" structure

Tephra map in Japan

Aira-Tanzawa (AT, 29-26ka) & Mt. Fuji (1707)



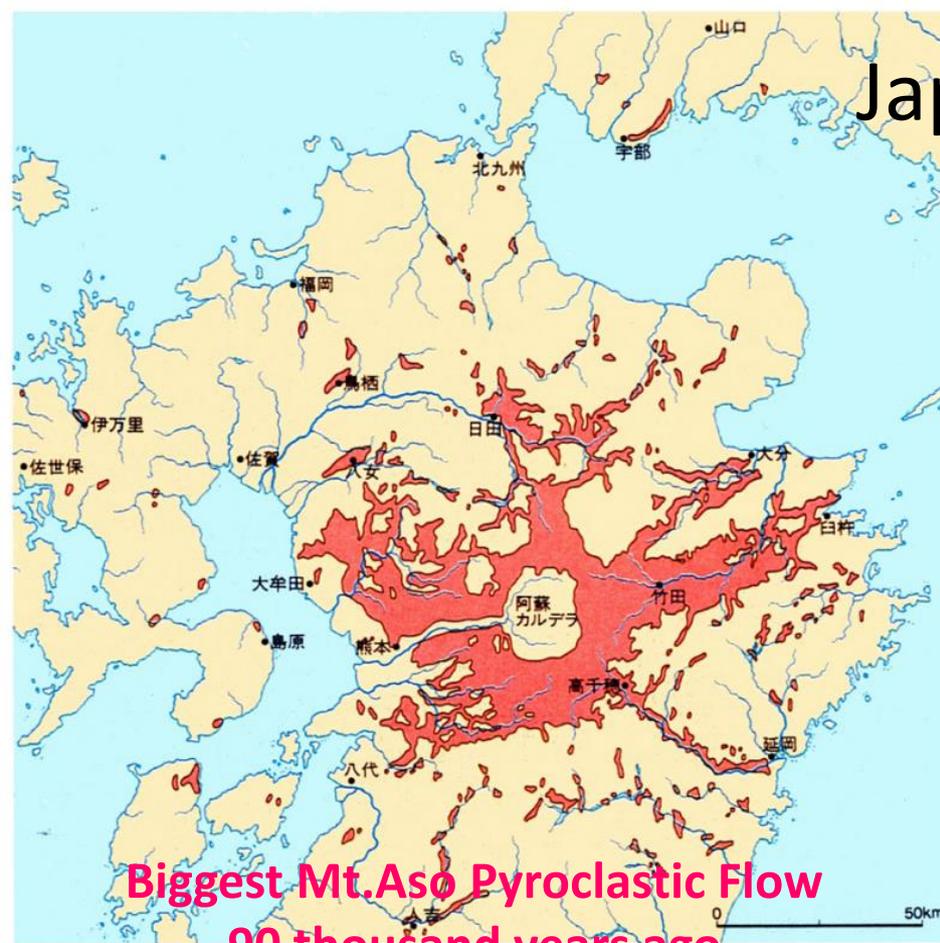
<http://www.bousai.go.jp/kazan/taisakukaigi/pdf/dai1kai/20150904siryo2.pdf>

「富士噴火による降灰分布図」
出典：富士山火山防災協議会 資料
<http://www.bousai.go.jp/fujisan/syuzokukai/>

Akahoya Tuff (7300 ya) in Mt. Aso



Japan had some huge size volcanic eruptions in the past!



**Biggest Mt.Aso Pyroclastic Flow
90 thousand years ago**

【図3】阿蘇4噴火の火砕流の分布

出典：大木・小林,「日本の火山」1987より

<http://bunarin.lolipop.jp/bunarin.lolipop/bunarintokodaisi/kitaminaminojilyounonn/marukihune/5/kaidokikankiyo.html>

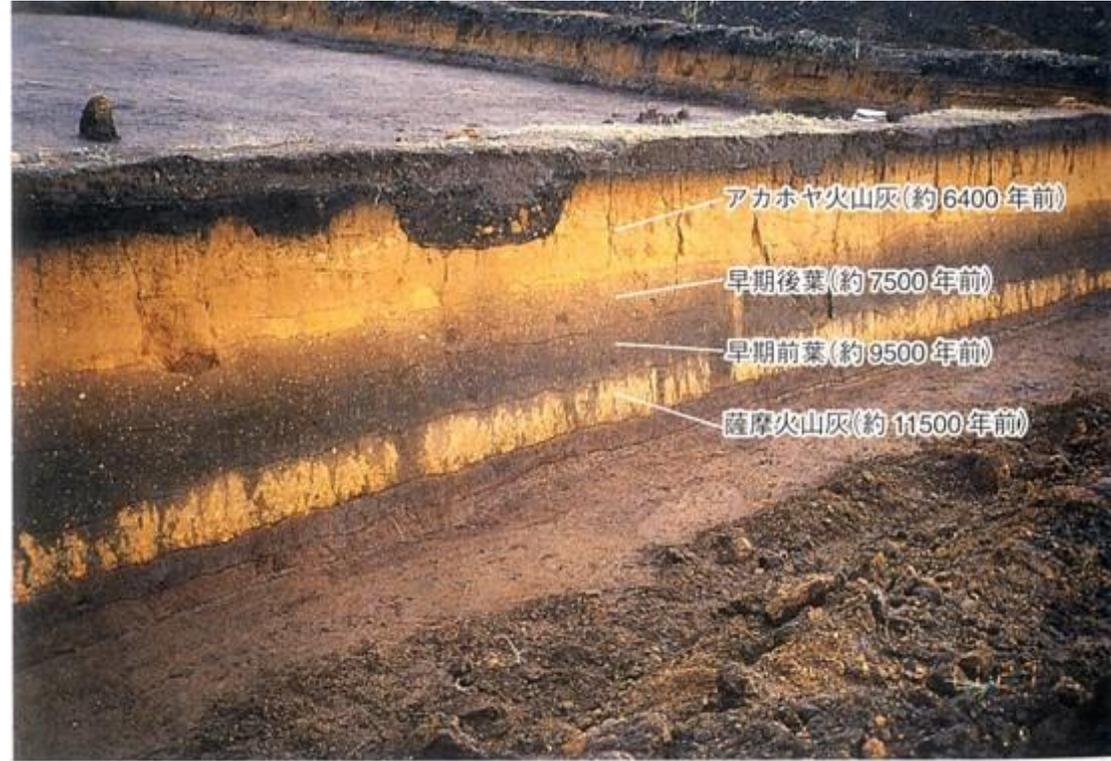
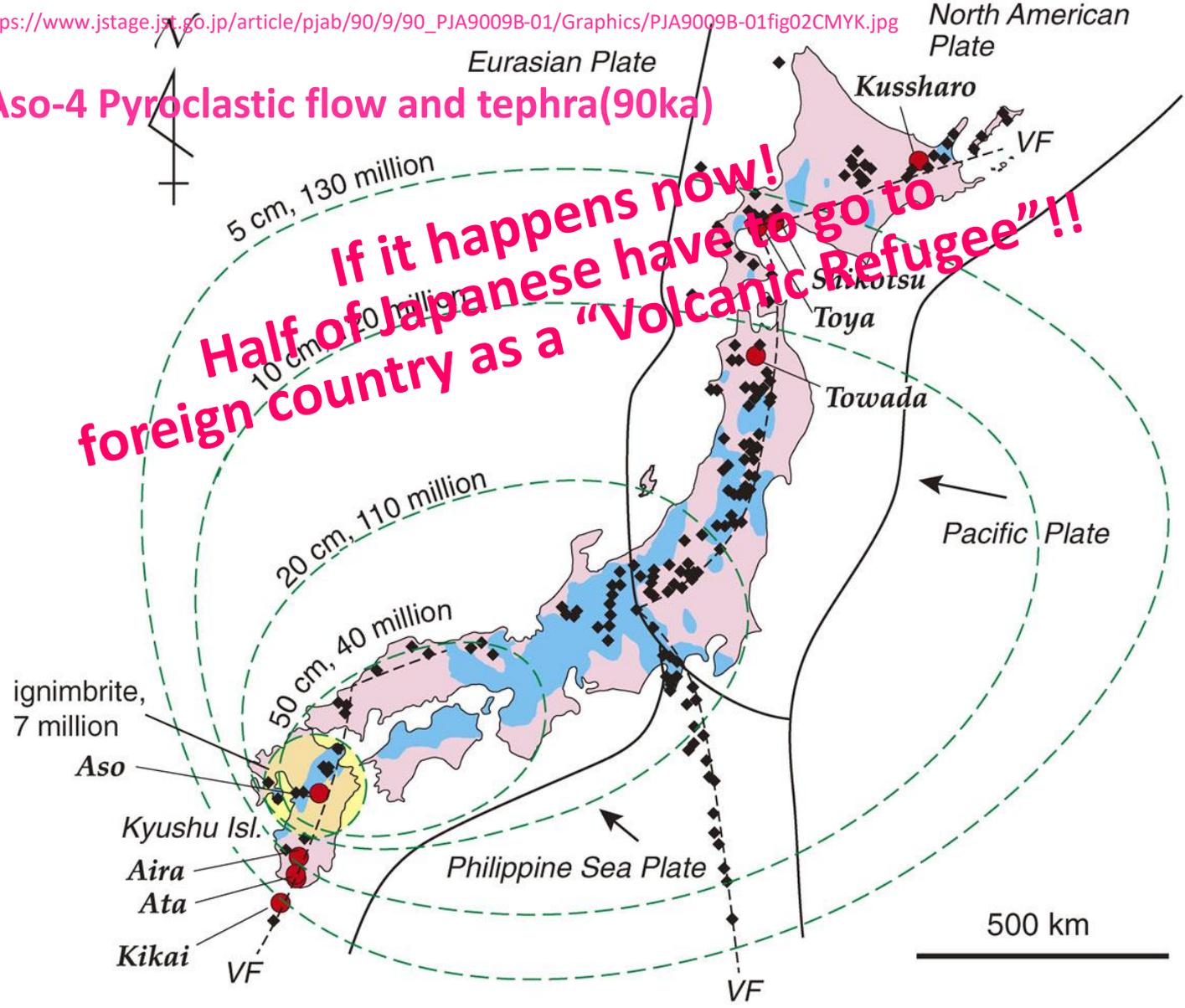


図 17 ● 上野原遺跡の地層写真

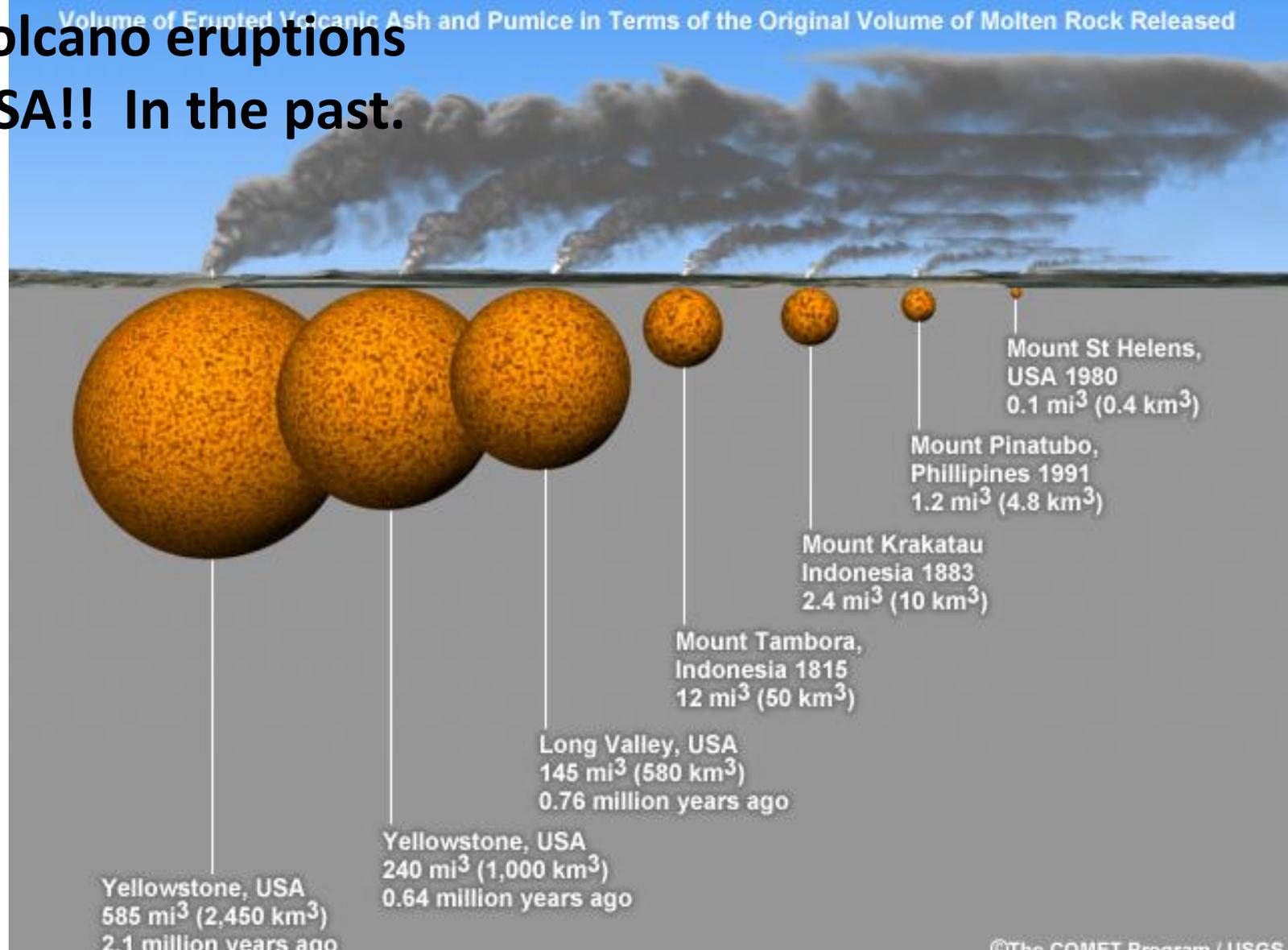
上野原遺跡ではアカホヤ火山灰 (5 層) と薩摩火山灰 (10 層) の間に、縄文時代早期後葉と前葉の 2 文化層が発見されている。薩摩火山灰 (10 層) 以下の生活は確認されていない。

Aso-4 Pyroclastic flow and tephra(90ka)

**If it happens now!
Half of Japanese have to go to
foreign country as a "Volcanic Refugee"!!**

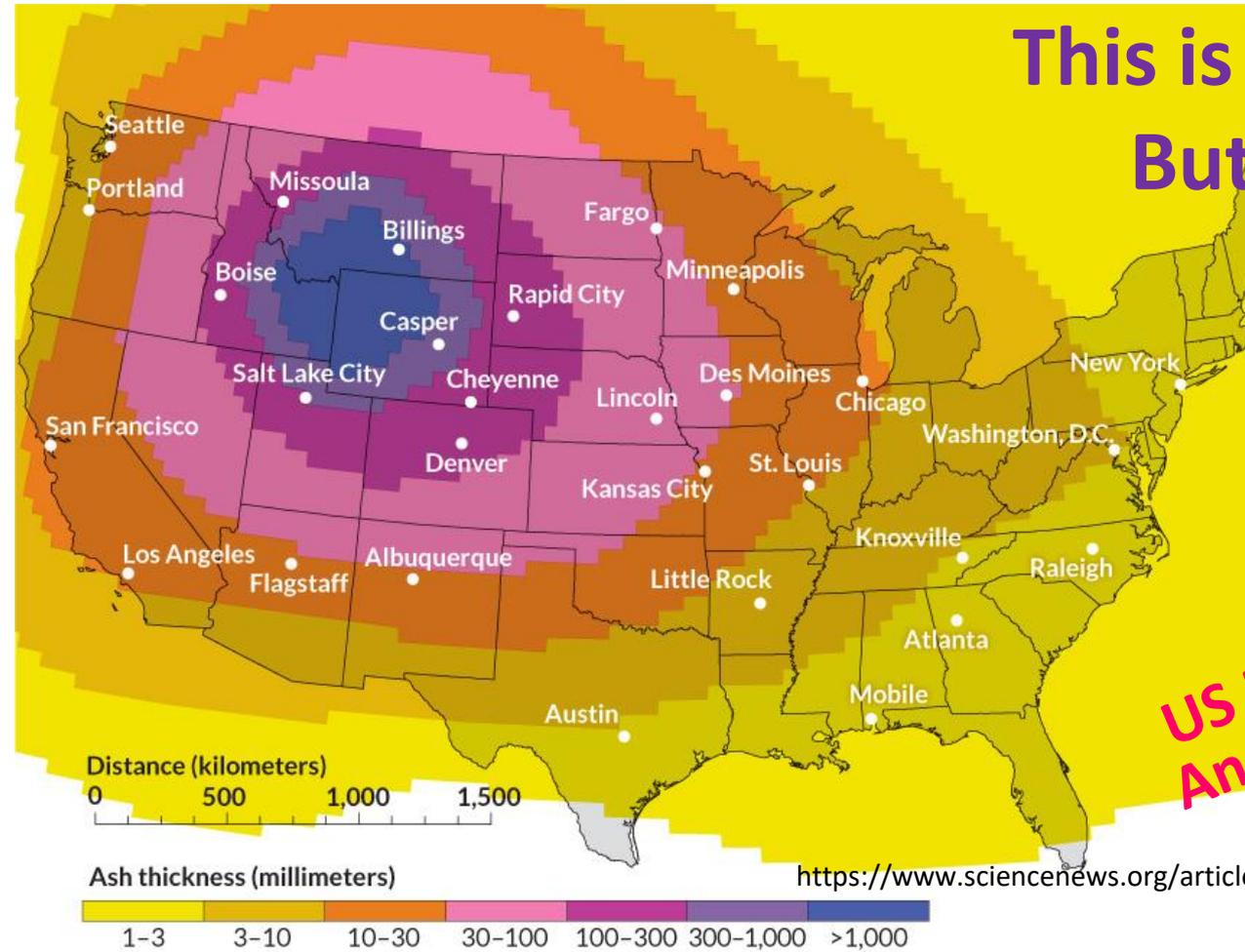


Most of huge volcano eruptions happened in USA!! In the past.



If it happens; A half of Americans become
“Volcanic refugee”!!

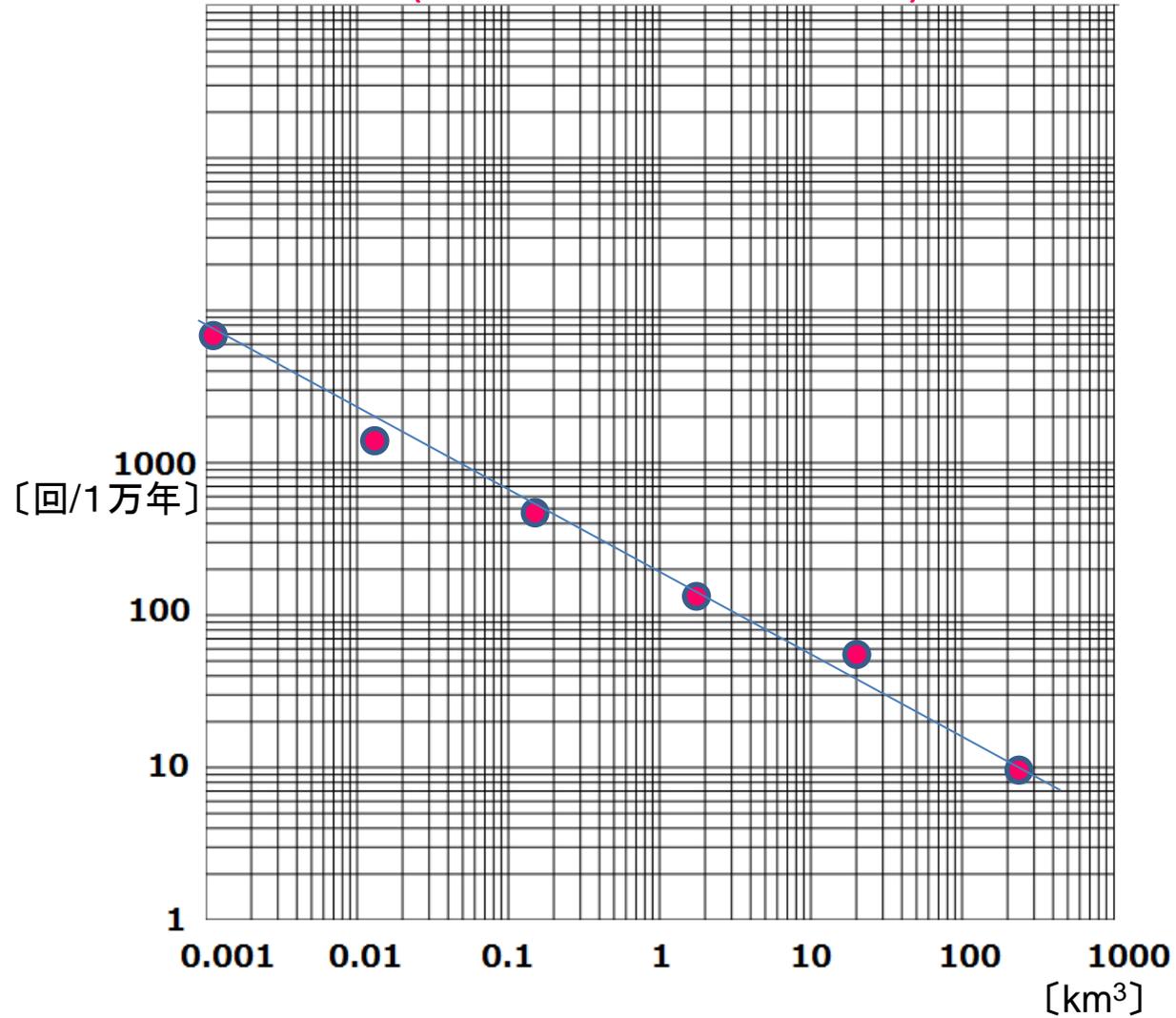
**This is not a scientific fiction
But a geological fact!!**



**US President has to ask to Mexico
And Canada; Acceptance of them!!**

<https://www.sciencenews.org/article/supervolcano-blast-would-blanket-us-ash>

Frequency vs. size of eruptions (Smithsonian Institution)



I suppose in
your country
some volcanic
ash layers are
found!

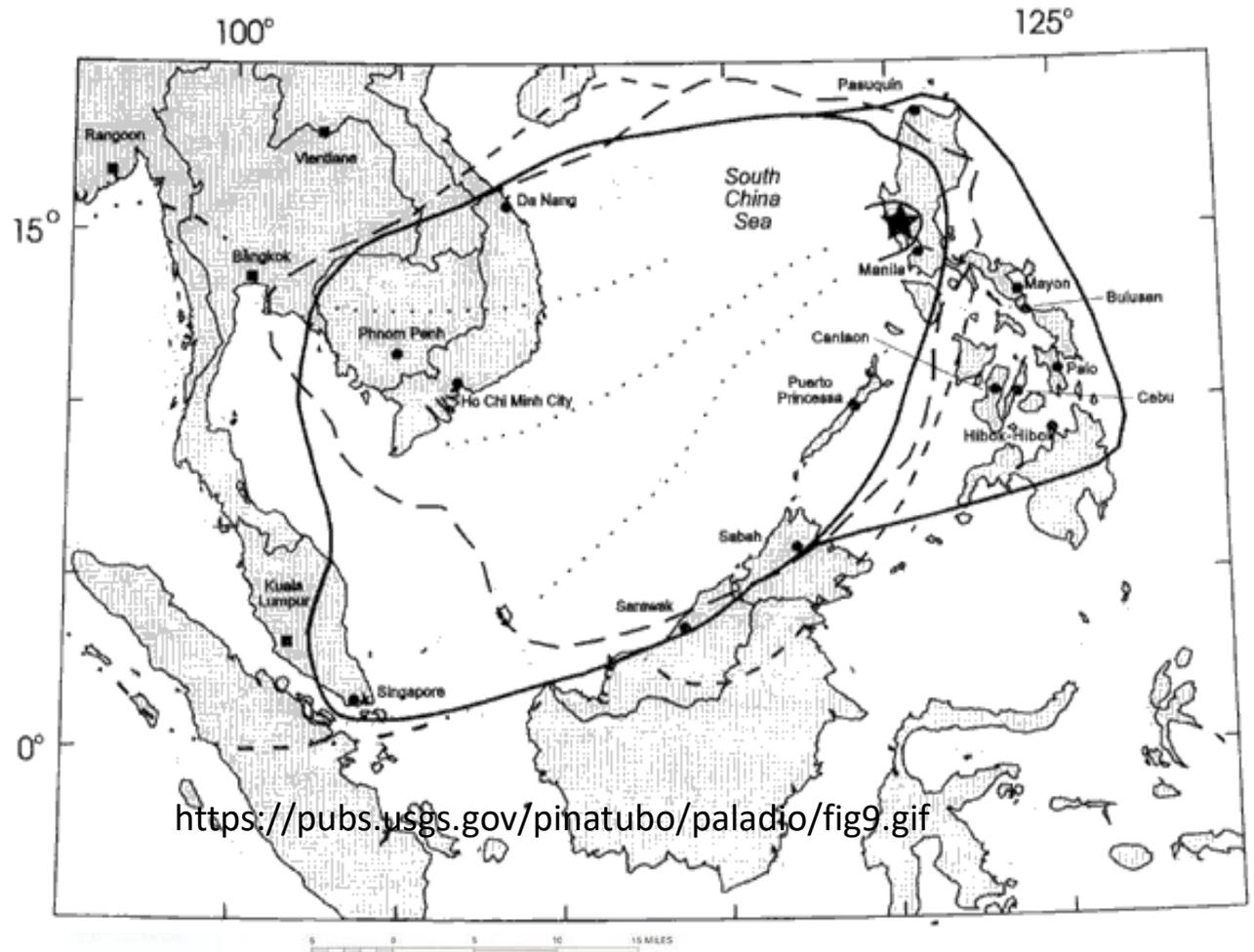


Figure 7. Distribution of tephra-fall deposits of the climatic eruption of June 15 (phase VI of Wolfe and Hoblitt, this volume), layer C, and locations of sections (triangles) sampled for grain-size and component data. KAK is location of section sketched in figure 1. Isopachs are in centimeters; sources of data as in figure 3, but open circles show total thickness of section (in centimeters), which may also include layers A and (or) B. (Umbal&Rodolfo,1996)