

<b>INTERNATIONAL HYDROGRAPHIC ORGANIZATION</b>	<b>INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)</b>
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**UNDERSEA FEATURE NAME PROPOSAL**  
(Sea NOTE overleaf)

Note: The boxes will expand as you fill the form.

<b>Name Proposed:</b>	Yanbaru Knoll	<b>Ocean or Sea:</b>	East china Sea
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<b>Geometry</b> that best defines the feature (Yes/No) :						
Point	Line	Polygon	Multiple points	Multiple lines*	Multiple polygons*	Combination of geometries*
		Yes				

\* Geometry should be clearly distinguished when providing the coordinates below.

	Lat. (e.g. 63°32.6'N)	Long. (e.g. 046°21.3'W)
<b>Coordinates:</b>	27°19.14'N	127°16.80'E
	27°18.36'N	127°17.16'E
	27°18.06'N	127°18.00'E
	27°18.12'N	127°18.48'E
	27°18.72'N	127°18.66'E
	27°19.32'N	127°18.72'E
	27°19.80'N	127°18.18'E
	27°19.74'N	127°16.92'E

<b>Feature Description:</b>	Maximum Depth:	1285 m	Steepness :	~ 25°
	Minimum Depth :	533m	Shape :	conical
	Total Relief :	775m	Dimension/Size :	2km <sup>3</sup> ; 8.4km <sup>2</sup>

<b>Associated Features:</b>	Crater, fault, volcanic cone, lava flow
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<b>Chart/Map References:</b>	Shown Named on Map/Chart:	
	Shown Unnamed on Map/Chart:	W182B, 6315
	Within Area of Map/Chart:	

<b>Reason for Choice of Name</b> (if a person, state how associated with the feature to be named):	Geographic name: Named after the adjacent northern part of Okinawa Island
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<b>Discovery Facts:</b>	Discovery Date:	2009 September
	Discoverer (Individual, Ship):	Nagasakimaru 288 <sup>th</sup> cruise

<b>Supporting Survey Data, including Track Controls:</b>	Date of Survey:	2001, 2008, 2011
	Survey Ship:	Kairei, Takuyo, Shoyo, Natsushima
	Sounding Equipment:	SEABEAM2112, SEABAT 8160
	Type of Navigation:	DGPS, GPS

	Estimated Horizontal Accuracy (nm):	0.005 nm
	Survey Track Spacing:	2 nm
	Supporting material can be submitted as Annex in analog or digital form.	

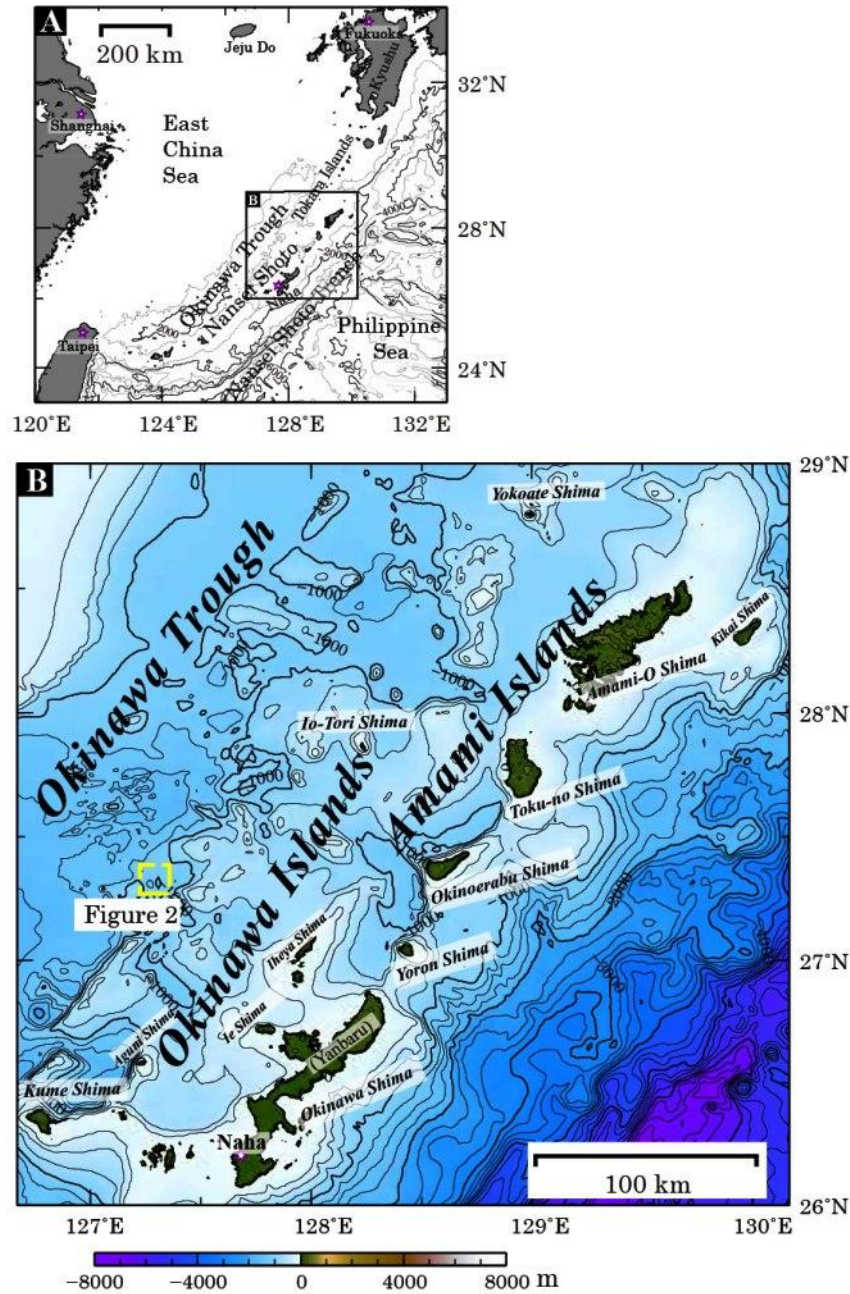
<b>Proposer(s):</b>	Name(s):	Hisayoshi Yokose
	Date:	2012 April
	E-mail:	yokose@sci.kumamoto-u.ac.jp
	Organization and Address:	Faculty of Science, Kumamoto University 2-39-1 Kurakami Chuoku, Kumamoto 860-8555, Japan
	Concurrer (name, e-mail, organization and address):	

<b>Remarks:</b>	<p>References</p> <p>Sato and Yokose (2007) Geochemical characteristics of the volcanic rocks from the Tokara islands, Ryukyu volcanic arc, Japan. AGU Fall Meeting V41D-0825.</p> <p>Yokose et al. (2009) Regularly spaced submarine rhyolitic-calderas on the Tokara volcanic ridge, northern Ryukyu arc, Japan. EGU Meeting XY541, Geophysical Research Abstracts.vol. 11, EGU2009-2283-5.</p> <p>Yokose et al. (2010) Mid-Pleistocene submarine acidic volcanism of the Tokara Islands, Japan. Jour. Geogr. 119, 46-68.</p> <p>Yokose et al. (2010) Submarine volcanic front on the central Ryukyu arc. JPGU Meetng, SVC063-32.</p> <p>Yokose et al. (2010) Evidence of recent hydrothermal activity in the Amami submarine caldera: discovery of Fe-Mn crusts enriched in As and Mo. JPGU Meeting, R219-008.</p> <p>Ishibashi (2011) Natsushima cruise report NT11-15, Japan Agency for Marine-Earth Science and Technology, Yokosuka, Japan. (<a href="http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/NT11-15_all.pdf">http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/NT11-15_all.pdf</a>)</p>
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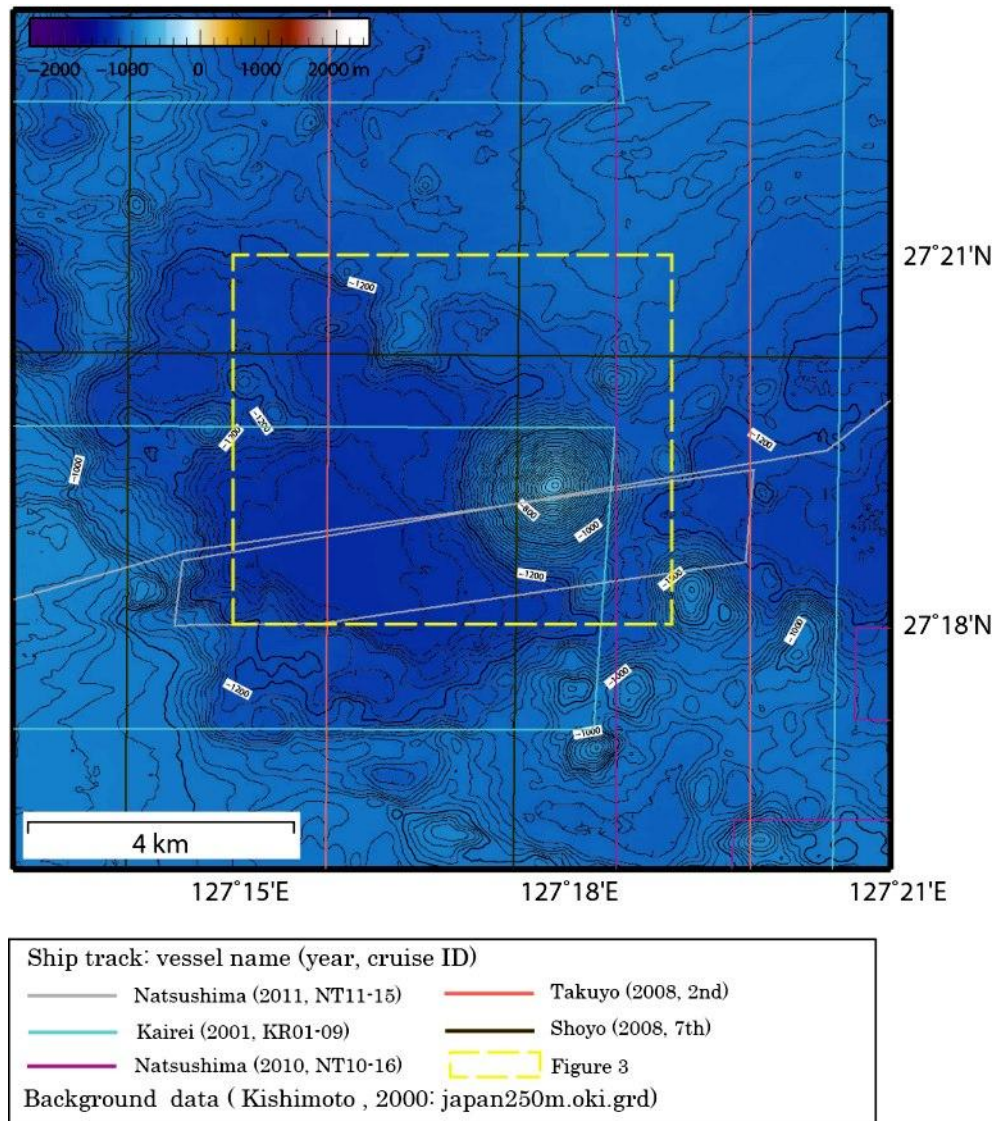
**NOTE :** This form should be forwarded, when completed :

- a) **If the undersea feature is located inside the external limit of the territorial sea :-**  
to your "National Authority for Approval of Undersea Feature Names" (see page 2-9) or, if this does not exist or is not known, either to the IHB or to the IOC (see addresses below);
- b) **If at least 50 % of the undersea feature is located outside the external limits of the territorial sea :-**  
to the IHB or to the IOC, at the following addresses :

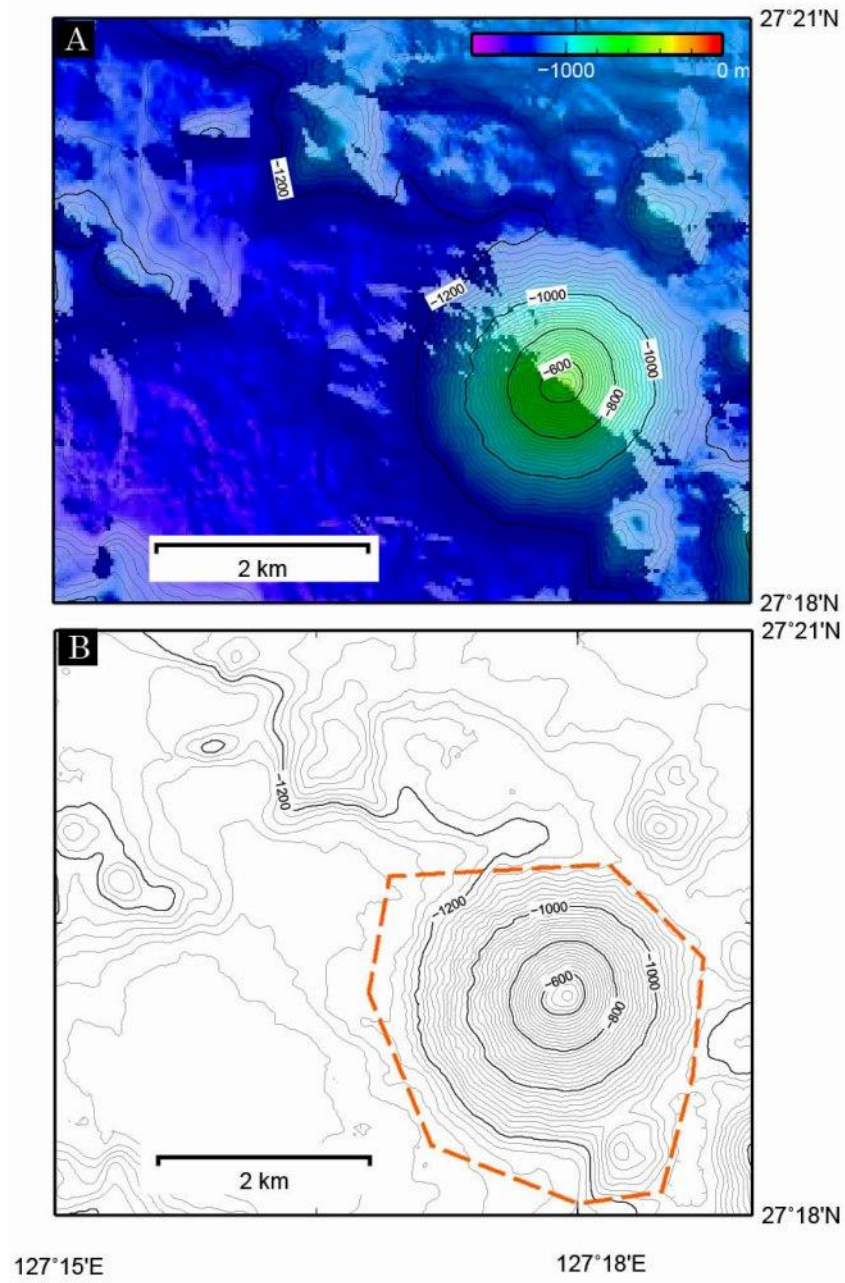
International Hydrographic Bureau (IHB) 4, Quai Antoine 1er B.P. 445 MC 98011 MONACO CEDEX <u>Principality of MONACO</u> Fax: +377 93 10 81 40 E-mail: <a href="mailto:info@ihb.mc">info@ihb.mc</a>	Intergovernmental Oceanographic Commission (IOC) UNESCO Place de Fontenoy 75700 PARIS <u>France</u> Fax: +33 1 45 68 58 12 E-mail: <a href="mailto:info@unesco.org">info@unesco.org</a>
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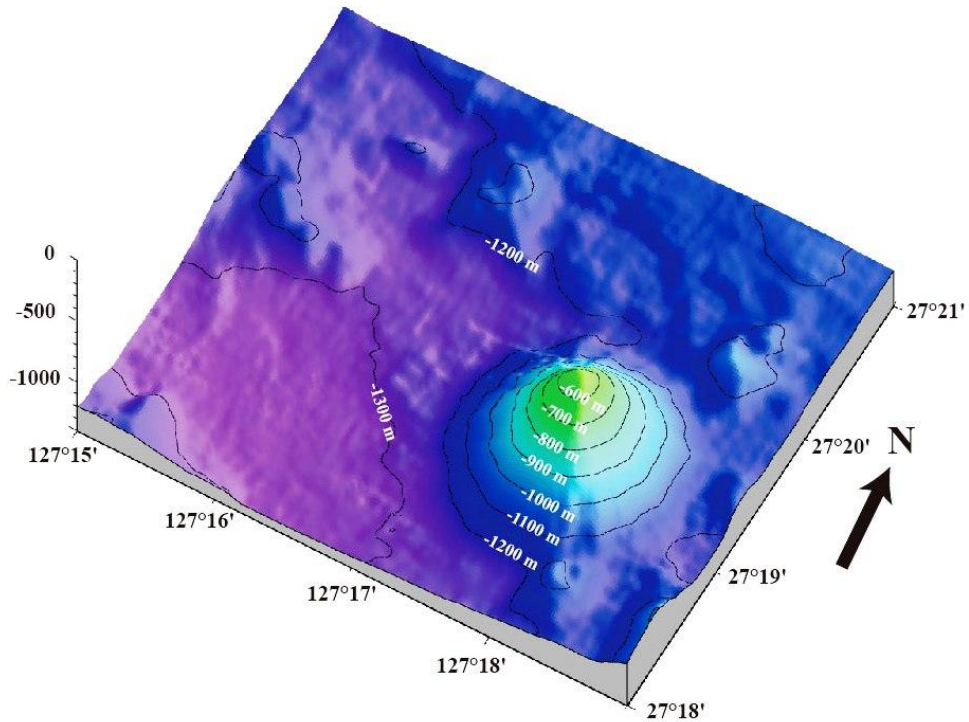
**Figure 1.** (A) Schematic bathymetric map (contour interval 1000 m) of the Nansei Shoto (Ryukyu Islands) and East China Sea. (B) Bathymetric details (contour interval 200 m) of the middle part of Nansei Shoto, the Okinawa and Amami Islands. Inset yellow box shows the Amami Calderas area. The area is covered by subsequent figure 2. The Yanbaru Knoll lies on southwest of the Tokara volcanic chain.



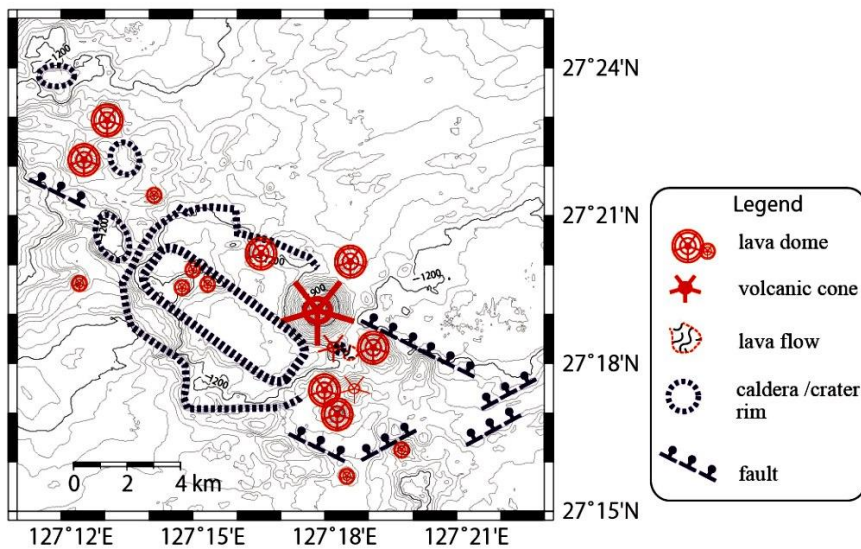
**Figure 2.** Distribution of multibeam tracklines from which bathymetry data were derived. (contour interval 20 m). Inset yellow box shows the Yanbaru Knoll covered by subsequent figure 3. Kishimoto (2000) is also used as a basemap grid in this Bathymetric map.



**Figure 3.** (A) Color shaded bathymetric map of the Yanbaru Knoll (contour interval 20 m). (B) The polygons delineating the feature are shown in red dash lines (contour interval 20 m).



**Figure 4.** Three-dimensional perspective view of the Yanbaru Knoll (contour interval 100 m) . The polygons delineating the feature are shown in red dash lines.



**Figure 5.** Geological interpretation (contour interval 20 m) of the Yanbaru Knoll based on the volcanic geomorphology and dredge samples.