

Dr Bipin Kumar Sinha  
Scientist-F

In-Charge

**Technical Section**

(re-designated as Research & Monitoring Section)

**Botanical Survey of India, CGO Complex  
Kolkata**

## Research Experience: About 33 year research experience in floristics, conservation and ethnobotany

### Ph.D.Thesis: Flora of Indi: Flora of Banda District, Uttar Pradesh ( Allahabad University, Allahabad, Uttar Pradesh)

Sl. No.	Year	TOPIC OF RESEARCH	Sponsoring Agency
1	1983-1986	Flora of Banda District, Uttar Pradesh at Allahabad University, Allahabad as Junior Research Fellow	District Flora Project Sponsored by B.S.I., Kolkata
2	1986-May 1991	Ethno-botanical Studies of Indian Plants (specially on medicinal & Food yielding Plants) as Senior Research Fellow under Dr S.K. Jain, Emeritus Scientist at N.B.R.I., Lucknow	CSIR Funded Project, New Delhi
3.	June 1991- July 1992	<i>Study of Plant Diversity of Himachal Pradesh</i> working as Research Associate, at CSIR Complex, Palampur (Himachal Pradesh)	CSIR, Project

# Chronological Details of Experience (Scientist-B to Scientist-F)

(Joined BSI as on 11<sup>th</sup> August, 1992)

Sl. No.	Working place in BSI	Post Held	From	To
1.	Andaman & Nicobar Regional Centre, Port Blair	Scientist-B	1992	1997
2.	Central Regional Centre, Allhabad	Scientist-C	1997	2003
3.	Eastern Regional Centre, Shillong	Scientist-D	2004	2009
4.	-----do-----	Scientist-E	2009	2013
5	Industrial Section Indian Museum	Scientist-E	2013	2014
5.	Industrial Section Indian Museum	Scientist-F	2014	2015
6	Botanical Survey of India, Head Quarter, Kolkata	Scientist-F	2015	Till date

## DETAILS OF ANNUAL RESEARCH PROGRAMMES CARRIED OUT (1992-2017)

Sl. No.	Year	TOPIC OF RESEARCH	Sponsoring Agency
1	August 1992-1996	<b>Studies on Plant diversity of Andaman &amp; Nicobar Islands (Flora of Great Nicobar Islands) at BSI, ANRC, Port Blair</b>	BSI, Project
2	--do--	<b>Flora of Andaman &amp; Nicobar Islands (Some Monocot Families)</b>	BSI, Project
2.	1997-2003	<b>Flora of Pachmarhi Biosphere Reserve, M.P. Flora of Khargaon district, Satpura Range, M.P. Flora of Uttar Pradesh Studies on Wetland flora of Salon &amp; Lakh Bahosi in Uttar Pradesh at BSI, CRC, Allahabad</b>	BSI, Project
3	2004-2013	<b>Studies of the Flora of Barapani Experimental Garden, Barapani Flora of Dampa Tiger Reserve, Mizoram Flora of Mizoram Vol-III (Monocots) Flora of Gibbon Wild Life Sanctuary, Assam Checklist of the Flora of Meghalaya Flora of South Garo Hills district, Meghalaya</b>	BSI, Project

Sl. No.	Year	TOPIC OF RESEARCH work carried out	Sponsoring Agency
4	2013-15	Interpretation of the Family : Compositae in ICONES Roxburghianae	BSI Projects
5	2015-2016	Revision of Family Gesneriaceae of N.E. India	BSI Projects
6	2015-17	Interpretation of the Family : Cucurbitaceae and Convolvulaceae in ICONES Roxburghianae	BSI Projects
<b>Funded Projects:</b>			
4.	2007-2010	Flora of Nokrek Biosphere Reserve, Meghalaya	MoEF &CC, New Delhi
5	2010-2015	iii). Flora of Blue Mountain, Mizoram	Flora India Project
6	2012-2014	FIELD DATA COLLECTION IN PYNURSLA AND MAWPHLANG BLOCK AND MAPPING OF FORESTS FLORA IN EAST KHASI HILLS, MEGHALAYA “ by A.A. Mao, B.K.Sinha, N. Odyuo & Ramesh Kumar	<b>(Funded by NESAC, Umiam, Meghalaya)</b>
7	2016-2019	Biodiversity assessment through long-term monitoring plots in Indian Himalayan landscape (NMHS sponsored project, Large Grant) Multidisciplinary studies in Floristic Assessment, Ecological Analysis, Ecosystem services, Conservation and sustainable management of selected National Parks in Western Himalaya (NMHS sponsored project-Medium Grant)	Funded by NMHS sponsored project by G. B. Pant Institute of Himalayan Environment and Development Kosi-Katarmal, Almora

**Mss. Revised and submitted for publication (2015-17 (as per referees comments))**

**Revision of Family Gesneriaceae of N.E. India**

**Flora of Mizoram Vol-3 (Families Hydrocharitaceae to Poaceae)**

**Nokrek Biosphere Reserve, Meghalaya**

**Dampa Tiger Reserve, Mizoram**

**Gibbon Wild Life Sanctuary, Jorhat, Assam**

**Edited Hindi Journal *Vanaspati Vani* 2014, 2015 & 2016**

# Training Course Attended

Sl. No.	Training Programme	Institution	Duration
1	Training programmed on <i>CDDO2PAO</i>	PAO Kolkata	14 <sup>th</sup> & 15 <sup>th</sup> February 2008.
2.	Workshop on Scientific & Technical Terminology and implementation of the official Language Policy	Centre for Training and Development, Bangalore	25 <sup>th</sup> -26 <sup>th</sup> May 2009
3	Science Administration and Research Management For Scientists, sponsored by DSCT, New Delhi)	Administrative Staff College of India, Bella Vista, Hyderabad	April-19-30, 2010
4.	DECISION MAKERS COURSE	Indian Institute of Remote Sensing at Dehra Dun	June 19-22, 2012
5	Policy for Science and Science for Policies	National Institute of Advanced Studies (NIAS), Indian Institute of Science Campus, Bangluru	November 16-20, 2015

# Administrative/ Scientific Duties carried out

## **Head of the office:**

- Worked as Head of the office, BSI, ERC, Shillong from 1<sup>st</sup> January 2010 to 31<sup>st</sup> March 2013.
- Worked as Head of the office, BSI, ISIM, Kolkata from 1<sup>st</sup> April 2013 to 31<sup>st</sup> February 2015.
- In-Charge, Technical Section, BSI, Head Quarter (January 2015- Till date)

## **AS DDO:**

- Andaman & Nicobar Circle: 1993-1995
- Central Regional Centre, Allahabad : 2000 to 2003
- ERC, Shillong : 2004 to 2009



Presently In-charge of the Technical Section and following Scientific Duties carried out (with the help of S. Saha (Botanist))

- Monitoring of **Scientific Reports** send by this office to Ministry or else where.
- Finalised **Annual Research Programme** of BSI on yearly basis (with consultation and advise of Director, BSI & Regional Head of Office).
- Monitoring in-house as well as funded projects related scientific works and unifying all reports and activities of the scientists on real time basis *i.e. **Monthly, Quarterly and Annually.***
- Maintained all **Scientific Reports and Field Tour Reports** submitted to scientists of BSI on their allotted projects.
- Reply to the parliament questions on the **Plant-diversity of India and conservation aspects.**
- Evaluate the Scientific Projects/ Schemes received outside organisation for expert comments.
- Prepared all agenda notes, action taken reports and intermediate progress reports for the annual or half yearly meetings of the Research Advisory & Monitoring Committee.
- Attended all scientific audit and performance Audit related to Annual Research Activities .
- Finalised Annual Plan, Performance Budget, Outcome Budget, Mid Term Review, Result Frame-work Document (RFD of BSI).
- Monitoring and Implementing agency of the Two Flag Ship Projects of MoEF&CC, New Delhi:
  - a) Assistance to Botanic Garden Scheme and
  - b) All India Co-ordinated Projects on Taxonomy (AICOPTAX) Scheme of the MoEF & CC.

## Other Activities

- Evaluated Ph.D.Thesis :Three
- Supervising research fellows for Ph.D. work in Taxonomy :Three
- Supervising Research Fellow for Project work: 5
- Review of articles for reputed Journals: 04
- Member Secretary, RAMC of BSI
- Subject Expert for selection of Associate Prof. Post, Nagaland University, Dimapur, and SSC, Guwahati

## Awards/ Appreciation :

- Received **Certificate of Appreciation by The Orchid Society of India (TOSI)**
- Certificate for **Appreciation received from TOLIC**, Shillong related to Raj-Bhasa Work.
- Received **Dr S. K. Jain Medal (2014) award on Taxonomy** by the Society of Angiosperm Taxonomy, Dehra Dun

## PUBLICATIONS

### **Books Published/ Mss submitted for Publications: (5)**

JAIN, S.K., B. K. SINHA AND R. K. GUPTA 1991. **Notable plants in Ethnomedicine of India.** Deep Publication, New Delhi.

SINHA, B.K. 1992. **Flowering Plants of Palampur (Himachal Pradesh)**, in *CSIR Bulletin* 1. (CSIR Publication-Palampur).

SINHA, B. K. 1999. **Flora of Great Nicobar Island.** (eds. By P. K. Hajra & P. S. N. Rao), Botanical Survey of India, Calcutta.

DIXIT, R. D. AND B. K SINHA 2001. **Pteridophytes of Andaman & Nicobar Islands.** M/s Shiva Offset Printers, Bishen Singh & Mahendra Pal Singh, DehraDun.

Mao, A.A, B.K.Sinha, D.Verma & N. Sharma 2016. **Checklist of the Flora of Meghalaya,** Meghalaya Biodiversity Board, Meghalaya

### **Publication of Research Papers:**

**Number of Papers Published: 118**

**Accepted: 02**

**Communicated: 03**

### **POPULAR HINDI ARTICLES:**

**Published Research Papers: 50**

### **New Taxa described: (04):**

*Zingiber meghalayense* (Zingiberaceae); *Cheilocostus khasianus* (Costaceae) and *Bulbophyllum manabendrae* (Orchidaceae), *Dendrobium Shompenii* (Orchidaceae).

## PUBLICATIONS

**New Records for India: (4):** *Dendrobium incurvum* (Orchidaceae), *Kaempferia siphonantha* (Zingiberaceae), *Pycnarrhena longifolia* (Menispermaceae), *Dioscorea nummularia* (Dioscoreaceae), *Impatiens monticola* (Balsaminaceae)

**New Record for States (23):** *Aeschynanthus gracilis* (Gesneriaceae), *Aglaia perviridis* (Meliaceae), *Ancistrocladus heyneanus* (Ancistrocladaceae), *Antrophyum obovatum* (Vittariaceae), *Curcuma aurantiaca* (Zingiberaceae), *Didymoplexis pallens* (Gesneriaceae), *Dobinea vulgaris* (Anacardiaceae), *Eria carinata* (Orchidaceae), *Fissistigma manubriatum* (Annonaceae), *Fissistigma bicolor* (Annonaceae), *Harpullia arborea* (Sapindaceae), *Hyptis capitata* (Lamiaceae), *Kingidium deliciosum* (Orchidaceae), *Lycianthus laevis* (Solanaceae), *Lysimachia deltoidea* (Primulaceae), *Mycetia mukherjiana* (Rubiaceae), *Phryma leptostachya* (Phrymaceae), *Pterocymbium tinctorium* var. *tinctorium* (Sterculiaceae), *Sapria himalaya* Griff (Rafflesiaceae), *Sauropus macrophyllus* (Euphorbiaceae), *Sterculia rubiginosa* (Sterculiaceae), *Stereochilus hirtus* (Orchidaceae) and *Utricularia furcellata* Oliv. (Lentibulariaceae)

**Critically rare species in N.E. Region (11):** *Antrophyum plantagineum* (Vittariaceae), *Campanumoea javanica* (Campanulaceae), *Caulokaempferia linearis* (Zingiberaceae), *Codonopsis javanica* (Campanulaceae), *Diplomeris pulchella* (Orchidaceae), *Epithema carnosum* (Gesneriaceae), *Hemiorchis pantlingii* (Zingiberaceae), *Indofevillea khasiana* (Cucurbitaceae), *Jasminum listerii* (Oleaceae), *Neogyna gardneriana* (Orchidaceae) and *Porpax gigantea* (Orchidaceae).

**New ethno-botanical uses (02):** *Stemona tuberosa* (rhizome used cure of malaria fever and chronic cough and cold.), *Schoenoplectus articulatus* (seeds as food).



## New Species Discovered

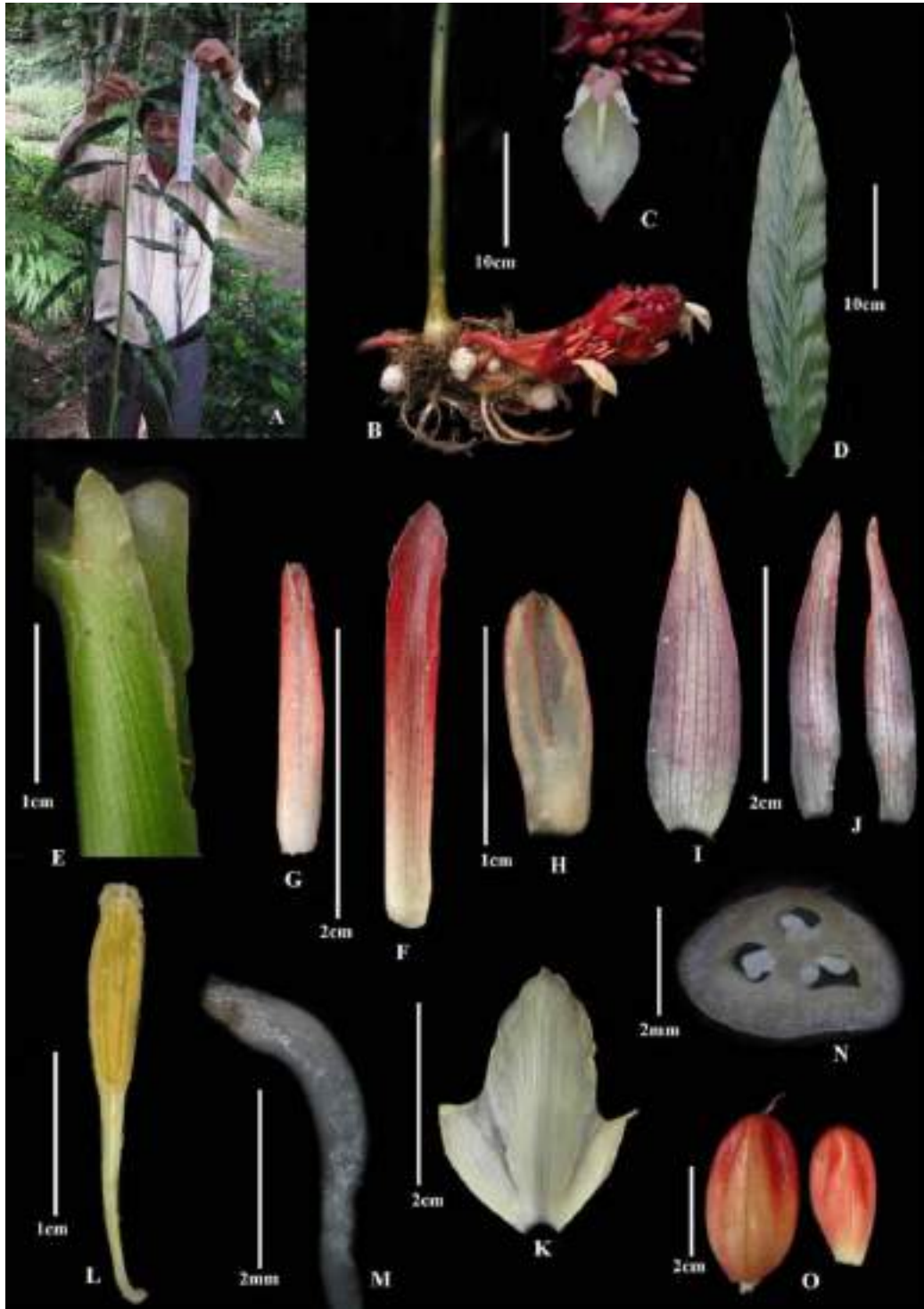


*Bulbophyllum manabendrae*



*Sauromatum meghalayense*

*Zingiber bipinianum*



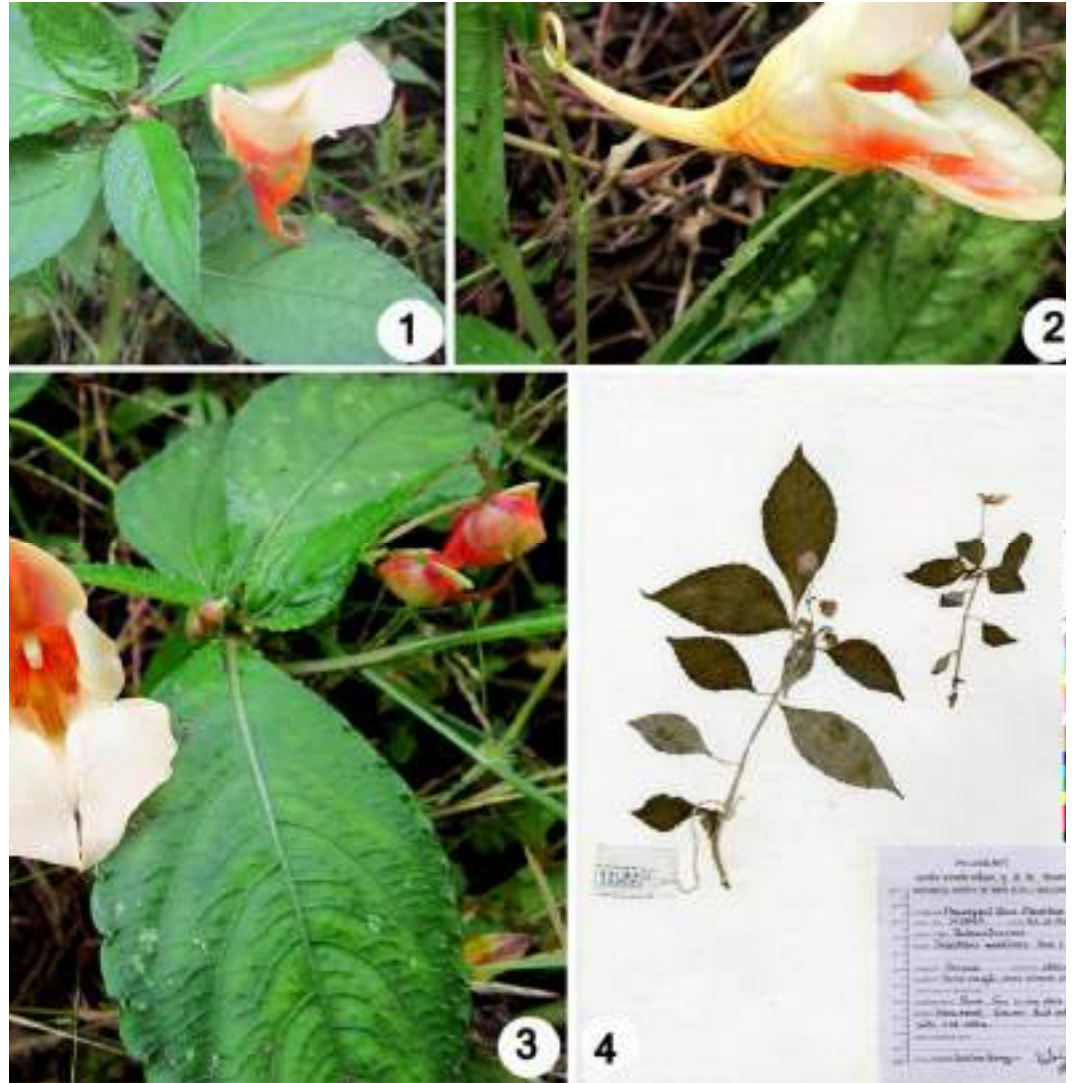
*Zingiber meghalayense*



New Records for India



*Stereochilus hitus*



*Impatiens monticola*





***Sapria himalayana* (New Records for Mizoram)**



## Species Rediscovered

*Iodes hookeriana*



*Arisaema wattii* from Nagaland



*Jasminum listeri*

*Fissistigma manubriatum*



*Hemiorchis pantlingii*





## Rare species



***Fissistigma verrucosum***





*Caulokaempferia linearis*- a  
rare Ginger





*Amomum pauciflorum*



*Helicia lacerus*



*Larsenianthus careyanus*



RET Species



*Magnolia hodgsonii*



*Friesodielsia forniculata*



*Stixis suaveolens*



*Dalhousiea bracteata*





• *Actinodaphne obvata*

*Callicarpa longifolia* var. *lanceolaria*







*Ardisia colorata*



*Tetraphyllum bengalense*



*Claoxylon longipetiolatum*



*Actinodaphne obovata*





**Orchids Species Growing in Barapani**









## Future Research Programmes (2016-2020)

**Biodiversity assessment through long-term monitoring plots in Indian Himalayan landscape (NMHS sponsored project, Large Grant)**

**Multidisciplinary studies in Floristic Assessment, Ecological Analysis, Ecosystem services, Conservation and sustainable management of selected National Parks in Western Himalaya (NMHS sponsored project-Medium Grant)**

**Revision of any Families/ Genera to be allotted under the Flora of India Projects**

# Biodiversity assessment through long-term monitoring plots in Indian Himalayan landscape (Funded Project)

## Objectives:

To create a geospatial and genetic database on the flora of Himalaya and the climate change induced impact on floral diversity of the region.

To establish long term floral diversity monitoring plots across the Himalayan region.

To develop long term monitoring protocols for selected indicator taxa in the region and to develop appropriate methodology for propagation of individual species for conservation.

To develop local capacity building among students, teachers and NGO's in long term monitoring through training programmes and publications for awareness.

## Proposed landscapes for long-term monitoring

Great Himalayan National Park (Himachal Pradesh)

Valley of Flowers (Uttarakhand)

Neora Valley (West Bengal)

Kyangnosla Alpine Sanctuary, Gnathang Plateau (Sikkim)

Tawang District and Namdapha National Park (Arunachal Pradesh)

## Manpower for the project:

**RA-3**

**JPF-5**

**Field Assistant-2**



Progress of Funded Project:

**Great Himalayan NP, Himachal Pradesh**

- Tour Conducted: 2 nos
  - i. 20.09.16 to 05.10.2016
  - ii. 23.11.2016 to 06.12.2016
- Plant Collection: 295 Species
- Plant Identification: 135 Species



View of Rolla



*Primula floribunda*



*Rubus macilentus*



*Aesculus indica*

# Neora Valley NP, West Bengal

- Tour Conducted: 2 nos
  - i. 05.10.2016 to 10.10.2016.
  - ii. 14.12.2016 to 28.12.2016.
- Plant Collection: 316 Species
- Plant Identification: 126 Species



View of Neora Valley



*Dactylicapnos scandens*



*Mahonia napaulensis*



*Pleione praecox*



# Tawang District, Arunachal Pradesh

- Tour Conducted: 1 nos.
  - i. 16.09.2016 to 10.10.2016.
- Plant Collection: 130 Species
- Plant Identification: 115 Species



View of Zemithang Valley



*Impatiens racemosa*



*Rhododendron maddenii*



*Swertia bimaculata*



# Gnathang Valley, Sikkim

- Tour Conducted: 1 nos
  - i. 16.09.2016 to 04.10.2016
- Plant Collection: 130 Species
- Plant Identification: 50 Species



View of Gnathang Valley



*Sarcopyramis nepalensis*



*Cyananthus lobatus*



*Streptolirion volubile*

# Herbarium Data Base

<b>Family</b>	<b>Genus</b>	<b>Species</b>	<b>No. of Sheets</b>
<b>35</b>	<b>247</b>	<b>1074</b>	<b>7758</b>





**THANK YOU**