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Institute/ University	Central Institute of Freshwater Aquaculture (<i>Indian Council of Agricultural Research</i>)
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Date of Birth	17 th November, 1963
Sex	Male

Academic qualifications

1.	Ph.D. (1994)	Animal Nutrition from National Dairy Research Institute, Karnal, India.
2.	M.V.Sc. (1989)	Animal Nutrition from Birsa Agricultural University, Ranchi, India.
3.	B.V.Sc. A.H. (1986)	Veterinary Science & Animal Husbandry from Bidhan Chandra Krishi Viswavidyalay, Mohanpur, Nadia, India.

Academic awards	<ul style="list-style-type: none"> • ICAR (India) Senior Research Fellow for Ph.D. degree program. • International Society OfS Environment Protection Science Academy, Gorakhpur has awarded Young Scientist Award for 2001.
Research Experiences	<ul style="list-style-type: none"> • Fish Nutrition • Animal Nutrition
Current Research Interests	<ul style="list-style-type: none"> • Nutrient Profiling of Freshwater Fish • Feed additive and trace mineral studies • Lipid Nutrition in fish • Waste utilization in Aquaculture.
Current Research Projects	<ol style="list-style-type: none"> 1. Outreach activity on Nutrient Profiling and Evaluation of fish as a Dietary Component. 2. Outreach Activity on Fish Feeds. 3. Use of Feed Additive and Micronutrients to enhance feed utilization in Fishes. 4. Evaluation of Production performances and quality assessment of carp utilizing certain potential organic wastes.
Completed Projects	<ol style="list-style-type: none"> 1. Nutrition and dietary studies with carp, catfish and prawn. 2. Development of flow-through system for Industrial Aquaculture. 3. Nutritional Studies and diet development of cultivable carp, catfish and prawn. 4. Feed formulation for Nutritional responses in selected freshwater fish. 5. Aquaculture Diversification and Wastewater Management. 6. Breeding of <i>O.bimaculatus</i> and off farm trials of pabda. 7. Evaluation and utilisation of various wastes in Aquaculture.
Publications	<ol style="list-style-type: none"> 1. Paul,B.N., S Das, A.K. Datta, S.S.Giri, S.N. Mohanty (2012). Effect of Dietary Protein Levels on Growth of <i>Ompok pabda</i> (Siluridae) Fry. Animal Nutrition and Feed Technology, 12: 241-246. 2. Paul,B.N.,S. Das, S.S.Giri, D.N.Chattopadhyay, R.N.Mandal, P.P.Chakrabarti.(2012). Performance of <i>Cirrhinus mrigala</i> Fingerlings on Feeding Dried Distillers Grain Soluble. Indian Journal of Animal Research (In Press). 3. Giri,S.S., Sahoo,S.K. and Paul,B.N. (2011) Initiatives to conserve long chain poly-unsaturated fatty acids (LC-PUFA) in human being

through Aquaculture.Proc. 1st Indian Academy of Veterinary Nutrition and Animal Welfare Conference held at Durg, India, 24-25th Sept., p-28-31.

4. **Paul,B.N.**, Datta,A.K., Giri,S.S. and Mohanty,S.N.(2011) Effect varying levels of dietary lipids on growth and body composition of *Labeo bata* fingerlings. Animal Nutrition and feed Technology, 11: 265-270.
5. **Paul,B.N.**, A.K.Datta,S.Das, D.N.Chattopadhyay, S.S. Giri,and S.N.Mohanty.(2011). Effect of Dietary Lipid Levels on Growth and Carass Composition of *Ompok pabda* (Siluridae) fry. Indian Journal of Animal Nutrition, 28(2): 198-202.
6. Giri,S.S.,Sahoo,S.K.,**Paul,B.N.**,Mohanty,S.N. and Sahu,A.K,(2011) Effect of dietary protein levels on growth,feed utilization and carcass composition of endangered barged catfish *Horabagrus brachysoma*(Gunther 1864) fingerlings. Aquaculture Nutrition, DOI: 10.1111/j.1365-2095.2010.00787.x 17:332-337.
7. **Paul,B.N.**, Datta,A.K., Giri,S.S. and Mohanty,S.N.(2011) Carbohydrate requirement of *Labeo bata*. Indian Journal of animal Nutrition, 28: 79-82.
8. **Paul,B.N.**, Giri,S.S., Datta,A.K. and Mohanty,S.N.(2010) Efficacy of Mustard cake based diet on growth and carcass composition of *Labeo bata*. Proc. of 8th Indian Fisheries Forum held at Kolkata, 22-26 Nov., 2008, pp 242-245.
- 9.Giri,S.S.,Sahoo,S.K.,Rath,S.C.,**Paul,B.N.**,Rangacharyulu,andMohanty,S. N.(2010). Fish Nutrition, feeds and feeding with special emphasis to Indian major carp polyculture. Proc.of 7th Biennial ANA Conference held at Bhubaneswar, 17-19Dec., 2010.pp 96-98.
10. Lenka,S.,Giri,S.S. and **Paul, B.N.**(2010). Nutrient digestibility and gastro-intestinal enzyme activity of *Cyprinus carpio* (var.communis) fingerlings fed water washed neem seed cake incorporated diets. Indian Journal of Animal Sciences, 80 (5):486-89.
11. **Paul,B.N.**, Giri,S.S.,Sarkar,S. Mohanty,S.N. and Sarangi,N.(2010) Effect of feeding different levels of protein and lipid on growth and carcass composition of *Puntius gonionotus*. Animal Nutrition and Feed Technology, 10: 81-86.
12. **Paul,B.N.**, Datta,A.K., Giri,S.S. and Mohanty,S.N.(2009) Dietary Protein requirement of *Labeo bata* fry. Animal Nutrition and Feed Technology, 9: 179-184.
13. S.Das., **Paul,B.N.**, Sengupta,J. and Datta,A.K. (2009) Beneficial effects of fish oil to human health: A Review. Agri.Rev., 30 (3): 199-205.

14. **Paul,B.N.**,Sarkar,S., Gir,S.S., Mohanty, S.N. and Mukhopadhyay, P.K.(2006) Dietary Phosphorus and Calcium Requirements of Rohu *Labeo rohita* Fry. *Animal Nutrition and Feed Technology*, 6: 257-263.
15. **Paul,B.N.**, Sarkar,S., Giri,S.S. and Mohanty, S.N. (2005) Vitamin E requirement of *Catla catla* Fry. *Indian Journal of Animal Nutrition*. 22: 237-240.
16. **Paul,B.N.**, Giri,S.S., and Mohanty,S.N. (2005) Performance of *Puntius gonionotus* fed mustard cake based diet. *Indian Journal of Animal Nutrition*, 22:241-243.
17. Giri,S.S.,Sahoo,S.K.,Lenka,S.,Rangacharyulu,P.V., **Paul,B.N.**, Sahu, A.K., Mohanty, S.N. and Mukhopadhyay, P.K.(2005) Effects of partial replacement of dietary fish-meal by meat-meal, goat liver and shrimp-meal on growth and survival of *Clarias batrachus*(Linn.).*Indian Journal of animal Sciences*, 75:977-981.
18. Giri,S.S., Mohanty,S.N., **Paul,B.N.** and Sarangi,N. (2004) Recent trends in Aquatic Nutrition. Lead Paper In: Fifth Biennial Conference on “New Dimensions of Animal Feeding to sustain Development and competitiveness”at NIANP, Adugodi, Bangalore from Nov. 24-26, 2004.
19. **Paul,B.N.**, Sarkar,S. and Mohanty, S.N.(2004) Dietary Vitamin E requirement of mrigal *Cirrhinus mrigala* (Ham.) Fry. *Aquaculture*, 242:529-536.
20. Sau,S.K., **Paul,B.N.**, Mohanta,K.N. and Mohanty,S.N.(2004) Dietary Vitamin E requirement , fish performance and carcass composition of rohu (*Labeo rohita*) fry. *Aquaculture*, 240:359-368.
21. **Paul,B.N.**, Sarkar,S., Mohanty,S.N.and Mukhopadhyay,P.K. (2004) Effect of dietary attractant on feed utilisation and growth of Rohu *Labeo rohita* (Ham.) fry. *Animal Nutrition and Feed Technology*,4:145-152.
22. **Paul,B.N.**, Sarkar,S., Giri,S.S., Rangacharyulu, P.V. and Mohanty, S.N.(2004) Phosphorus requirement and optimal Calcium/Phosphorus ratio in the diet of mrigal *Cirrhinus mrigala* (Ham.) fingerlings. *J.Appl. Ichthyol.* 20:306-309.
23. Rangacharyulu,P.V., Giri,S.S., **Paul,B.N.**, Yasoda, K.P., Rao,R.J., Mahendrakar,N.S., Mohanty.S.N. and Mukhopadhyay, P.K. (2003) Utilization of fermented silkworm pupae silage in feed for carps. *Bioresource Technology*, 86: 29-32.
24. **Paul,B.N.**,and Mohanty,S.N.(2002) Recent Advances in carp feeding in India.Lead paper presented at the IVth biennial conference and

- Exhibition at WBUAF,Kolkata, Animal Nutrition association of India,Nov20-22,2002,pp42-48.
25. Saha,C., **Paul,B.N.** and Mohapatra, B.C.(2001) High density fish culture in flow-through system: an ecofriendly approach. J. Ecophysiol.Occup. Hlth.1:245-248.
 26. Saha, C., **Paul, B.N.**, Adhikari, S.,Mohapatra,B.C., Pattamajhi, P., and Ayyappan, S. (2000). Effect of stocking density on fish production in a Flow-Through system. J. Aqua. 8:49-54.
 27. Saha, C., and **Paul, B.N.** (2000). Flow-through system for Industrial Aquaculture in India. Aquaculture Asia. V 4: 24-26.
 28. Rangacharyulu, P.V.,**Paul, B.N.**, Nandi, S., Sarkar, S., and Mukhopadhyay, P.K.(2000). Effect of different dietary protein and energy levels on growth, nitrogen excretion and body composition of rohu (*Labeo rohita*). J. Aqua. 8: 17-24.
 29. **Paul, B.N.**, Adhkari, S., and Ayyappan, S. (2000). Effect of feeding frequency on the growth of *Labeo rohita* juvenile and on water quality in Flow-through system. Indian J. Anim. Nutr. 17 (1): 64-66.
 30. **Paul. B.N.**, Sarkar,S., and Mukhopadhyay, P.K. (1999). Comparative effect of varied dietary plant protein sources on growth performance of rohu (*Labeo rohita*) J. Aqua.7: 11-15.
 31. Nandi, S., **Paul,B.N.**, Sarkar, S., and Mukhopadhyay, P.K. (1999).Lipid and fatty acids in eggs of Indian major carps and their significant. Nat. Acad. Sci. Letters, 22: (3 &4) 62-65.
 32. **Paul, B.N.** (1999). Potentiality of non-conventional feed resources in Aquaculture Feed: A review. Agric. Rev., 20 (2): 129-134.
 33. **Paul, B.N.**, Saha, C., Ghosh, A.S., and Adhikari,S. (1999). Effect of feed pellet diameter on growth of rohu juveniles in Flow-through Aquaculture system. Indian J. Anim. Nutr. 16: 34-37.
 34. **Paul, B.N.**, Nandi, S., Sarkar, S., and Mukhopadhyay, P.K. (1998). Dietary essentiality of phospholipids for Indian Major Carp larvae. Asian Fisheries Science. 11:253-259.
 35. **Paul, B.N.**, Nandi, S., Sarkar,S., and Mukhopadhyay P.K. (1997). Effect of feeding unconventional animal protein sources on the nitrogen metabolism in Rohu *Labeo Rohita* (Hamilton). Israeli J. Aquaculture-Bamidgeh. 49:183-192.
 36. **Paul, B.N.**, Rangacharyulu, P.V., Sarkar,S., and Mukhopadhyay, P.K. (1996). Effect of feed color on the growth performance and activity of digestive enzymes in Rohu (*Labeo rohita*) fry. J. Aqua., 4:15-18

Popular Articles	<ol style="list-style-type: none"> 1. Giri, S.S, Pradhan, C, Mohanty, T, Paul, B.N, Sahoo, S.K and Mohanty, S.N. (2011) Protease Inhibitors in fish feeds: An overview. Agrovet Buzz. 2. Paul, B.N., Das,S., Giri, S.S. and Mohanty, S.N.(2010)Water soluble Vitamins in Aquaculture Nutrition. Fishing Chimes, 30(9):13-16. 3. Giri,S.S., Paul,B.N., Sahoo,S.K., Rangacharyulu, P.V., Rath, S.C. and Mohanty, S.N.(2010). Fish oils and Cardio-vascular Health. Fishing Chimes, 30:37-39. 4. Paul,B.N.and Giri,S.S. (2009) Macro-minerals in Fish Nutriton. Fishing Chimes,29:26-27. 5. Sau,S.K. and Paul,B.N. (2004) Over view of fat soluble vitamins in Aquaculture. Fishing Chimes, 24: 28-30. 6. Paul,B.N.,and Mukhopadhyay,P.K. (2001). Importance of Trace Minerals in Aquaculture Nutrition. Fishing Chimes, 21:35-36. 7. Paul, B.N. (2000). Fish Larval diet and its significance in Aquaculture Nutrition. Fishing Chimes.20:37-38. 8. Mukhopadhyay,P.K., and Paul, B.N. (1995). Values addition components in Aquaculture feeds. Fishing Chimes., 6: 15-16.
Book Chapter	<ol style="list-style-type: none"> 1. Giri, S.S. and Paul, B.N. (2007) Role of Nutrition in fish Health. In: Disease Manage ment in Freshwater Pisciculture (Eds. Mishar,B.K. et al.,) 2. Chakrabarti, P.P., Mandal S.C., Paul,B.N. and Mandal,R.N.(2011). Untiring efforts never failing attitude made a poor farmer to reach a height of successful progressive fish farmer. In: Aquaculture Innovators (Eds. Radheshyam et al.), CIFA Publications. Pp 114-120.
Expert Consultation (FAO)	Acted as an expert member in Group2-Nutrition and Feeding under FAO/CIFA/NACA Expert Consultation on the Intensification of Food production in Low Income Food Deficit Countries through Aquaculture, held at Bhubaneswar, India,16-19 October 2001, published in FAO Fisheries Report No.718 (2003)
Workshop Abstracts	Ayyappan, S., Mukhopadhyay, P.K., Mohanty, S.N., Rangacharyulu, P.V., Nandi, S., Jena, J.K., and Paul, B.N. , (1997). (Eds.) Abstracts, National Workshop on Fish and Prawn Feeds 2-3 September, 1997, Sponsored by Dept. of Biotechnology, Govt. of India, and Organised

	by CIFA and Association of Aquaculturists, Kausalyaganga, Bhubaneswar -751 002.
Booklet	Chattopadhyay, D.N., Mukhopadhyay, P.K., Mandal, R.N., Paul, B.N., Chakrabarti, P.P., Rath, S.C. and Giri, S.S.(2011). Supplementary Feed of Carps. (Bengali) Publication of CIFA. Under Outreach Activity on Fish Feeds (A network Project of ICAR) Booklet No. 4 (2011).
Pamphlet	Datta, A.K., Chattopadhyay, D.N., Mandal, R.N., Paul, B.N. and Pandey, B.K. (2011).Wastewater Aquaculture Centre – A profile (Bengali). Pamphlet published by CIFA, Rahara Centre
Proceedings	<p>Mohanta, K.N., Rath, S.C., Saha, A., Paul, B.N., Sahoo, S.K. and Giri, S.S. (2012). Proceedings of National Workshop and Stakeholders meet on Fish Feeds. Published by ICAR, New Delhi and CIFA, Bhubaneswar.</p> <p>Saha, A., Rath, S.C., Mohonta, K.N., Debraj, C.,Paul, B.N. and Giri, S.S. (2012). International Brainstorming Meet on Recent Advances in Fish Reproductive Physiology. Published by CIFA, Bhubaneswar.</p>