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THE FOOD PLANTS OR HOSTS OF SOME FIJIAN INSECTS. V.

WILLIAM GREENWOOD*

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Credit for the various records is given by initials as follows :
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LEPIDOPTERA

Except where otherwise stated, the records for Lepidoptera refer to the feeding habits of the larva.

TORTRICIDAE (TORTRICINAE) : *Adoxophyes fasciculana* (Walker) feeds on leaves of *Camellia sinensis* (L.) Kuntze (Theaceae) (R.L.), *Jasminum sessile* A. C. Smith (Oleaceae) (W.G.) and *Jasminum simplicifolium* Forst. f. (Oleaceae) (W.G.)

TORTRICIDAE (OLETHREUTINAE) : *Cryptophlebia vitiensis* Bradley feeds on seeds of *Albizia procera* (Roxb.) Benth. (Mimosaceae) (W.G.) and *Pithecellobium dulce* (Roxb.) Benth. (Mimosaceae) (W.G.). *Strepsicrates holotephras* (Meyrick) feeds on *Syzygium aromaticum* (L.) Merr. & Perry (W.G.), *Syzygium gracilipes* (A. Gray) Merr. & Perry (W.G.) and *Psidium cattleianum* Sabine (W.G.), and on leaves of *Psidium guajava* L. (R.V.) (Myrtaceae). *Acroclita physalodes* Meyrick feeds on flowers of *Barringtonia racemosa* (L.) Spreng. (Barringtoniaceae) (W.G.).

TINEIDAE : *Decadarchis sisyranthes* Meyrick feeds on leaves of *Pandanus odoratissimus* L.f. (Pandanaceae) (W.G.). *Decadarchis fibrivora* Meyrick feeds on leaves of *Pandanus caricosus* Spreng. (Pandanaceae) (W.G.).

LYONETIIDAE : *Opogona omoscopa* (Meyrick) feeds on seeds of *Tropaeolum majus* L. (Tropaeolaceae) (W.G.).

GRACILLARIIDAE : *Caloptilia xanthopharella* (Meyrick) feeds on leaves of *Glochidion cordatum* (J. Muell.) Seem. (Euphorbiaceae) (W.G.) and *Breynia disticha* Forst. f. (Euphorbiaceae) (W.G.).

HELIODINIDAE : *Hieromantis munerata* Meyrick feeds on flowers of *Melochia ?vitiensis* A. Gray (Sterculiaceae) (W.G.). *Hieromantis praemiata* Meyrick feeds on flowers of *Koelreuteria elegans* (Seem.) A. C. Smith (Sapindaceae) (W.G.).

EPERMENIIDAE : *Epermenia symmorias* Meyrick feeds on flowers of *Pittosporum brackenridgei* A. Gray (Pittosporaceae) (W.G.).

PYRALIDAE : *Marasmia poeyalis* (Boisduval) feeds on leaves of *Oryza sativa* L. (Poaceae) (R.L.). *Etiella behri* Zell. feeds on pods of *Cajanus cajan* (L.) Millsp. (Fabaceae) (W.G.). *Sylepta derogata* (F.) feeds on leaves of *Abelmoschus esculentus* (L.) Moench (Malvaceae) (W.G.) and *Hibiscus diversifolius* Jacq. (Malvaceae) (W.G.).

SPHINGIDAE : *Hippotion celerio* (L.) feeds on leaves of *Ipomoea batatas* (L.) Lam. (Convolvulaceae) (R.L.). *Gnathothlibus erotus* (Cramer) feeds on leaves of *Pentas lanceolata* (Forsk.) K. Schum. (Rubiaceae) (W.G.).

LYMANTRIIDAE : *Dasychira fidjiensis* Mabille and Vuillot feeds on leaves of *Rhizophora mangle* L. (Rhizophoraceae) (G.R.) and on leaves of *Psidium cattleianum* Sabine (Myrtaceae) (G.R.).

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ARCTIIDAE : *Utetheisa clareae* Robinson feeds on leaves of *Messerschmidia argentea* (L.f.) Johnston (Boraginaceae) (G.R.). *Utetheisa pulchelloides* Hampson subsp. *marshallorum* Rothschild feeds on leaves of *Messerschmidia argentea* (L.f.) Johnston (Boraginaceae) (G.R.).

HYPSIDAE : *Argina cribraria* (Clerck) feeds on leaves and flowers of *Sophora tomentosa* L. (Fabaceae) (W.G.).

NOCTUIDAE : *Helicoverpa armigera* (Hübner) subsp. *conferta* (Walker) feeds on pods of *Cajanus cajan* (L.) Millsp. (Fabaceae) (R.L.) and on cobs of *Zea mays* L. (Poaceae) (R.L.). *Plusia* (*Phytometra*) *chalcites* (Esper) feeds on leaves of *Coleus scutellarioides* (L.) Benth. (Lamiaceae) (W.G.), *Mentha viridis* L. (Lamiaceae) (W.G.) and *Lathyrus odoratus* L. (Fabaceae) (W.G.). *Othreis fullonia* (Clerck) imago pierces the fruit of *Citrus grandis* (L.) Osbeck (Rutaceae) (R.L.). *Othreis materna* (L.) imago attacks the fruit of *Mangifera indica* L. (Anacardiaceae) (R.L.). *Mythimna* (*Pseudaletia*) *separata* (Walker) feeds on unexpanded leaves of *Zea mays* L. (Poaceae) (R.L.).

COLEOPTERA

Except where otherwise stated, the records for Coleoptera refer to the feeding habits of the larva.

BOSTRYCHIDAE : *Xylothrips religiosus* Boisd. in timber of *Swietenia macrophylla* King (Meliaceae) (R.L.), *Persea americana* Mill. (Lauraceae) (R.L.), *Maniltoa grandiflora* (A. Gray) Scheff. (Caesalpiniaceae) (R.L.), *Delonix regia* (Boj. ex Hook.) Raf. (Caesalpiniaceae) (W.G.) and *Mangifera indica* L. (Anacardiaceae) (W.G.). *Xylopsocus castanoptera* Frm. feeds in shoots of *Delonix regia* (Boj. ex Hook.) Raf. (Caesalpiniaceae) (W.G.) and *Bauhinia monandra* Kurz (Fabaceae) (W.G.).

HISPIDAE : *Promecotheca reichei* Baly. feeds between leaf surfaces of *Livistona chinensis* (Jacq.) R. Br. ex Mart. (Arecaceae) (W.G.). *Promecotheca bicolor* Maulik feeds on leaves of *Flagellaria indica* L. (Flagellariaceae) (R.P.) and *Metroxylon vitiense* (H. Wendl.) Benth. & Hook. f. (Arecaceae) (R.L.).

RUTELIDAE : *Adoretus versutus* Har. imago eats leaves of *Terminalia catappa* L. (Combretaceae) (W.G.) and *Commersonia bartramia* (L.) Merr. (Sterculiaceae) (W.G.).

CLERIDAE : *Necrobia rufipes* de Geer breeds in drying carcases of cattle (R.L.). *Necrobia ruficollis* F. breeds in drying carcases of cattle (R.L.).

BRUCHIDAE : *Bruchus chinensis* L. feeds in seeds of *Lathyrus odoratus* L. (Fabaceae) (W.G.) and *Cajanus cajan* (L.) Millsp. (Fabaceae) (R.L.). *Pachymerus gonager* F. feeds in seeds of *Tamarindus indica* L. (Caesalpiniaceae) (R.L.).

COCCINELIDAE : *Epilachna 28-punctata* F. larva and imago feed on leaves of *Solanum nigrum* L. (s. lat.) (Solanaceae) (R.L.) and *Arachis hypogaea* L. (Fabaceae) (R.L.).

SCOLYTIDAE : *Xyleborus mutilatus* Bldf. bores in stems of *Persea americana* Mill. (Lauraceae) (R.L.). *X. aplanatideclinis* Schedl. feeds in fruits of *Inocarpus fagifer* (Parkinson) Fosberg (Caesalpiniaceae) (R.L.) and in stems of *Persea americana* Mill. (Lauraceae) (R.L.). *X. compactus* Eichh. feeds in shoots of *Clidemia hirta* (L.) D. Don (Melastomataceae) (R.L.). *X. testaceus* Wlk. bores in trunks of *Citrus grandis* (L.) Osbeck (Rutaceae) (R.L.), in twigs of *Hydnocarpus wightianus* Blume (Flacourtiaceae) (R.L.) and in logs of *Endospermum macrophyllum* (J. Muell.) Pax & Hoffm. (Euphorbiaceae) (R.L.). *X. rameus* Schedl. bores in seeds of *Decussocarpus vitiensis* Seem. (Podocarpaceae) (R.L.). *X. fijianus* Schedl. bores in twigs of *Persea americana* Mill. (Lauraceae) (R.L.). *Cryphalus jatrophae* Samps. feeds in stems of *Acalypha wilkesiana* J. Muell. (Euphorbiaceae) (R.L.). *Hypothenemus peritus* Bldf. bores in branches of *Persea americana* Mill. (Lauraceae) (R.L.).

LYCTIDAE : *Minthea rugicollis* Wlk. feeds in stored roots of *Derris elliptica* (Roxb.) Benth. (Fabaceae) (R.L.).

PLATYPIDAE : *Crossotarsus saundersi* Chap. bores in branches of *Persea americana* Mill. (Lauraceae) (R.L.), in trunk of *Citrus grandis* (L.) Osbeck (Rutaceae) (R.L.) and in logs of *Maniltoa grandiflora* (A. Gray) Scheff. (Caesalpiniaceae) (R.L.). *C. externedentatus* Frm. bores in trunk of *Casuarina sp.* (="*C. nodiflora*" auct. non. G. Forst.) (Casuarinaceae) (R.L.).

CURCULIONIDAE : *Parendymia pilipes* Korsch. bores in timber of *Bruguiera gymnorhiza* (L.) Lam. (Rhizophoraceae) (R.L.). *Elytroteinus subtruncatus* Frm. imago eats fruits of *Citrus Limon* (L.) Burm. f. (Rutaceae) (R.L.). *Elytrurus smaragdus* Mshll. attacks leaves of *Piper methysticum* Forst. f. (Piperaceae) (R.L.). *Diorycaulus punctatellus* Frm. bred from ripe fruits of *Syzygium neurocalyx* (A. Gray) Christophersen (Myrtaceae) (W.G.). *Rhinoscapha lagopyga* Frm. imago attacks leaves of *Citrus* spp. (Rutaceae) (R.L.). *Calandra linearis* Herbst feeds in seeds of *Tamarindus indica* L. (Caesalpiniaceae) (R.L.).

HYMENOPTERA

BRACONIDAE : *Apantales samoana* Fullaway is parasitic on larva of *Cirphis unipuncta* Haw. (Noctuidae) (R.L.). *A. antipoda* Ash. is parasitic on larva of *Anomis flava* F. (Noctuidae) (R.L.). *A. expulsus* Turn. is parasitic on larva of *Phytometra chalcites* Esp. (Noctuidae) (R.L.).

SPHEGIDAE : *Sceliphron caementarius* Drury feeds on spiders (R.L.).

CHALCIDAE : *Brachymeria fijiensis* Ferr. is parasitic on larva of *Nacoleia diemenalis* Gn. (Pyralidae) (R.L.). *Proamatura aquila* Gir. is parasitic on larva of *Minthea rugicollis* Wlk. (Lyctidae) (R.L.).

AGAONIDAE : *Ceratosolen marshalli* Grandi. in fruits of *Ficus pritchardii* Seem. (Moraceae) (W.G.). *Blastophaga browni* Ashm. in fruits of *Ficus storckii* Seem. (Moraceae) (W.G.).

ICHNEUMONIDAE : *Diplazon laetatorius* F. is parasitic on larva of *Syrphus corollae* Fabr. var. *vitiensis* Bezzi (Syrphidae) (R.L.).

EULOPHIDAE : *Hemiptarsenus semialbiclavus* Gir. is parasitic on larva of *Phytomyza spicata* Mall. (Agromyzidae) (R.L.).

HEMIPTERA

APHIDAE : *Cerataphis lataniae* Bdv. on leaves of *Cocos nucifera* L. (Arecaceae) (R.L.), *Metroxylon vitiense* (H. Wendl.) Benth. & Hook. f. (Arecaceae) (R.L.). *Aphis gossypii* Glover on leaves of *Colocasia esculenta* (L.) Schott (Araceae) (R.L.) and *Crotalaria mucronata* Desv. (Fabaceae) (R.L.). *Aphis citricidus* Kerk. on shoots of *Citrus* spp. (Rutaceae) (R.L.). *Aphis maidis* Fitch. on leaves and stems of *Zea mays* L. (Poaceae) (R.L.). *Aphis neri* Boyer on leaves of *Asclepias curassavica* L. (Asclepiadaceae) (R.L.). *Rhopalosiphum nymphae* L. on stalks of *Eichhornia crassipes* (Mart.) Solms (Pontederiaceae) (R.L.) and *Oryza sativa* L. (Poaceae) (R.L.).

PSYLLIDAE : *Megatrioza vitiensis* Kirk. nymph feeds in galls in leaves of *Syzygium malaccense* (L.) Merr. & Perry (Myrtaceae) (R.L.). *Psylla compta* Crawf. feeds on young leaves of *Syzygium richii* (A. Gray) Merr. & Perry (Myrtaceae) (W.G.).

DELPHACIDAE : *Megamelus proserpina* Kirk. feeds on *Colocasia esculenta* (L.) Schott (Araceae) (R.L.).

POEKILLOPTERIDAE : *Euricania aperiens* Walk. feeds on leaves and stems of *Hernandia peltata* Meisn. (Hernandiaceae) (W.G.) and *Rhizophora mangle* L. (Rhizophoraceae) (W.G.). *Plestia marginata* Montr. feeds on leaves and stems of *Maniltoa grandiflora* (A. Gray) Scheff. (Caesalpiniaceae) (W.G.) and *Cynometra falcata* A. Gray (Caesalpiniaceae) (W.G.).

COCCIDAE : *Leucanium viride* Green on leaves and stems of *Gaillardia pulchella* Foug. (Asteraceae) (W.G.), on leaves and stalks of *Gerbera jamesonii* Bolus (Asteraceae) (W.G.), on leaves of *Lagerstroemia indica* L. (Lythraceae) (W.G.), on leaves and stems of *Gardenia hutchinsoniana* Turrill (Rubiaceae) (W.G.), on leaves and stems of *Chrysanthemum morifolium* Ramat (Asteraceae) (W.G.), on leaves and stems of *Ixora odorata* Hook. (Rubiaceae) (W.G.), on stems of *Caesalpinia pulcherrima* (L.) Sw. (Caesalpiniaceae) (W.G.), on stems of *Samanea saman* (Jacq.) Merr. (Mimosaceae) (W.G.) and on leaves and stems of *Pentas lanceolata* (Forsk.) K. Schum. (Rubiaceae) (W.G.). *Leucanium hemisphericum* T.T. on pinnae of *Adiantum hispidulum* Sw. (Adiantaceae) (W.G.). *Icerya seychellarum* Westw. on leaves of *Chrysophyllum cainito* L. (Sapotaceae) (W.G.), on stems of *Cinnamomum camphora* (L.) Nees & Eberm. (Lauraceae) (W.G.), on leaves of *Livistona chinensis* (Jacq.) R. Br. ex Mart. (Arecaceae) (W.G.), on leaves of *Pritchardia pacifica* Seem & H. Wendl. (Arecaceae) (W.G.), on leaves of *Artocarpus altilis* (Parkinson) Fosberg (Moraceae) (R.L.), on leaves of *Tectona grandis* L.f. (Verbenaceae) (R.L.), on leaves and stems of *Mimosa pudica* L. (Mimosaceae) (R.L.). *Aulacaspis pentagona* T.T. on stems and leaves of *Verbena* × *hybrida* Groenl. & Rümpl. (Verbenaceae) (W.G.) and *Triumfetta bartramia* (Tiliaceae) (W.G.), and on stems of *Urena lobata* L. (Malvaceae) (R.L.), *Malvastrum coromandelianum* (L.) Garcke (Malvaceae) (W.G.) and *Hibiscus diversifolius* Jacq. (Malvaceae) (W.G.). *Vinsonia stellifera* Westw. on leaves of *Cycas rumphii* Miq. forma *seemannii* (A. Braun) Kanehira (Cycadaceae) (W.G.) and *Syzygium richii* (A. Gray) Merr. & Perry (Myrtaceae) (W.G.). *Saissetia nigra* Wietn. on leaves and stems of *Mirabilis jalapa* L. (Nyctaginaceae) (W.G.) and stems of *Ruellia graecizans* Backer (Acanthaceae) (W.G.). *Pseudococcus citri* Risso on *Clidemia hirta* (L.) D. Don (Melastomataceae) (R.L.) and *Annona squamosa* L. (Annonaceae) (R.L.).

ALEURODIDAE : *Aleurodes greenwoodii* on underside leaves of *Ficus benjamina* L. (Moraceae) (W.G.).

TETIGONIIDAE : *Nesosteles sanquinescens* Kirk. on inflorescence of *Dichanthium aristatum* (Poir.) Hubbard (Poaceae) (W.G.).

TINGIDAE : *Nesocypselas dicysta* Kirk. on leaves of *Ficus vitiensis* Seem. (Moraceae) (W.G.). *Nesophrestes dreptias* Kirk. on leaves of *Ficus fulvo-pilosa* Summerhayes (Moraceae) (W.G.). *Pamocephala phylloptera* Crawf. on leaves of *Ficus fulvo-pilosa* Summerhayes (Moraceae) (W.G.). *Cicadula euryphaesa* Kirk. on leaves and stems of *Glochidion concolor* J. Muell. (Euphorbiaceae) (W.G.).

CAPSIDAE : *Lygus muiri* Popp. on young shoots of *Solanum melongena* L. (Solanaceae) (R.L.).

LYGAEIDAE : *Graptostethus servus* F. feeds on shoots of *Canavalia maritima* (Aubl.) Thou. (Fabaceae) (W.G.).

PENTATOMIDAE : *Nezara viridula* L. on *Pisum sativum* L. (Fabaceae) (R.L.), on leaves of *Lycopersicum esculentum* Mill. (Solanaceae) (R.L.), on stems of *Nicotiana tabacum* L. (Solanaceae) (R.L.), on leaves of *Lactuca sativa* L. (Asteraceae) (R.L.), on leaves of *Ageratum conyzoides* L. (Asteraceae) (R.L.), on stems of *Vigna sinensis* (L.) Endl. (Fabaceae) (R.L.) and on stems of *Gossypium barbadense* L. (Malvaceae) (R.L.).

THYSANOPTERA

THRIPIDAE : *Thrips tabaci* Lindeman feeds on leaves of *Lactuca sativa* L. (Asteraceae) (R.L.). *Heliothrips longiceps* Karny. feeds on inflorescence of *Bothriochloa glabra* (Roxb.) A. Camus (Poaceae) (W.G.). *Haplothrips soror* Schmutz. in flowers of *Dendrobium mohlianum* Reichb. f. (Orchidaceae) (W.G.).

Diptera

PHORIDAE : *Dohrniphora cleghorni* Bigot. bred from larva of *Heliothrips armigera* Hübn. (Noctuidae) (R.L.). *Megascelia scalaris* Low. bred from larva of *Heliothrips armigera* Hübn. (Noctuidae) (R.L.).

TRYPETIDAE : *Dacus passiflorae* Frogg. larva feeds in fruits of *Artocarpus altilis* (Parkinson) Fosberg (Moraceae) (R.L.) and A. *heterophyllus* Lam. (Moraceae) (R.L.), in pods of *Theobroma cacao* L. (Sterculiaceae) (R.L.), and in fruits of *Spondias dulcis* Sol. ex Parkinson (Anacardiaceae) (W.G.), *Garcinia sessilis* (Forst. & Forst. f.) Seem. (Clusiaceae) (W.G.) and *Elaeocarpus chelonimorphus* Gillespie (Elaeocarpaceae) (W.G.). *Dacus xanthodes* Broun. larva feeds in fruits of *Artocarpus altilis* (Parkinson) Fosberg (Moraceae) (R.L.) and *A. heterophyllus* Lam. (Moraceae) (R.L.). *Ensina sororcula* Wied. larva feeds in flower heads of *Gaillardia pulchella* Foug. (Asteraceae) (W.G.), *Wedelia biflora* (L.) DC. (Asteraceae) (W.G.) and *Eleutheranthera ruderalis* (Sw.) Schult. Bip. (Asteraceae) (W.G.).

TACHINIDAE : *Sturmia inconspicuella* Bar. bred from larva of *Prodenia litura* F. (Natuidae) (R.L.).

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ON THE ADAPTIVE SIGNIFICANCE OF THE LOSS OF AN OVIDUCT IN REPTILES

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Synopsis

The loss of the left oviduct is reported for the first time in five taxa of scincid lizards and redescribed in two other scincid taxa. These taxa, along with one other lizard taxon and two snake taxa, are the only reptiles known to have lost an oviduct, and they represent on the most conservative estimate at least ten, or perhaps eleven cases of the independent loss of an oviduct in reptiles.

These taxa can be divided into two subgroups whose morphology and ecology suggest two different adaptive reasons for the loss of the oviduct. One group, which comprises the snakes and the one legless lizard, consists entirely of attenuate burrowers with no specific latitudinal limitations in their distribution. The members of this group appear to have lost an oviduct as an adaptation to alleviate the problem of increased girth that would have resulted from having two oviducts full of eggs side by side. It is conjectured that such an increase in girth would increase the frictional surface of a burrowing form and also limit the number and types of preformed passageway through which it could pass. The second group consists of scincid lizards, all of which are fully limbed forms from diverse habitats and all of which are tropical in distribution. This group appears to have lost an oviduct in conjunction with a reduction in brood size to a constant one and as part of a life history found in many tropical lizards. This strategy involves maturity at an early age and frequent brood production : a life history strategy geared to reproductive efficiency, whereby the energy needed to develop and maintain a " superfluous " oviduct might well be reallocated to other functions.

It would appear that the left oviduct was preferentially lost in all these taxa due to the fact that in squamates it is usually the shorter of the two oviducts, hence its loss is likely to be less disruptive to development. Finally, it is interesting to note that as far as is known the left ovary is still functional in all of the taxa in which the left oviduct has been lost.

INTRODUCTION

Within reptiles the loss or nearly total reduction of an oviduct has been reported to date only in the following taxa, all of which are squamates : among lizards, the anguid genus *Anniella* (Coe and Kunkle, 1906) and the two distantly related skink taxa *Tribolonotus* (Greer and Parker, 1968*a*) and *Sphenomorphus schultzei* (Greer and Parker, 1974) ; among snakes, the scolecophidian genera *Anomalepis*, *Helminthophis*, *Leptotyphlops*, *Typhlina* and *Typhlops* (Robb and Smith, 1966) and certain species of the colubrid genus *Tantilla* (Clark, 1970*a*). In all these taxa it has invariably been the left oviduct that has been lost, and judging from the most conservative interpretation of phylogenetic relationships these taxa represent no fewer than five different cases of independent oviducal loss.

In this paper I review the skink taxa in which the loss of the left oviduct has previously been reported, and I report for the first time the loss of this structure in five other skink taxa. These taxa bring the minimum number of independent losses of an oviduct in reptiles to ten or eleven. These new observations in conjunction with earlier ones provide the basis for speculation as to the adaptive significance of the loss of an oviduct in reptiles.

OBSERVATIONS

Gross examination of over 300 of the 800 + species of skinks reveals that the left oviduct is either totally absent or reduced to a nonfunctional vestige in all

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females examined in the following species. These species are arranged in seven groups that would be separated at a generic level in a conservative taxonomic treatment.

Tribolonotus. This highly distinctive genus of spiny skinks occurs in New Guinea, the Admiralty Islands, the Bismarck Archipelago and the Solomon Islands (Zweifel, 1966 ; Greer and Parker, 1968*a* ; and Cogger, 1972). The species are cryptic and are generally found only under surface cover such as rocks, logs and piles of litter. Current work indicates that *Tribolonotus* may be part of the same radiation that gave rise to the Australian Region's well known skink taxa *Corucia*, *Egernia*, and *Tiliqua* (Greer, personal observation), all of which apparently have paired oviducts.

The reproductive tracts of four of the eight species of *Tribolonotus* have been examined (*blanchardi*, *gracilis*, *pseudoponceleti* and *schmidti*) and in all the left oviduct was either absent or vestigial. Due to the fact that these species represent much of the ecological, morphological and geographical diversity in the genus (see references cited above), it is reasonable to assume that the genus as a whole lacks the left oviduct. The mode of reproduction is known for all four species mentioned above : the first three are oviparous ; *T. schmidti* is viviparous.

Sphenomorphus aignanus, *S. bignelli*, *S. louisiadensis* and *S. minutus*. Despite the fact that these four species of the Papuan-Solomon Islands area are currently placed in the genus *Sphenomorphus*, they bear only a superficial resemblance to the various other groups that make up this extremely diverse assemblage. Phylogenetically they are probably members of the radiation that gave rise to a large number of other well known taxa of the Australian Region such as *Eugongylus*, *Leiolopisma* and *Emoia* (Group II of Greer, 1974), all of which apparently have paired oviducts.

These four species fall into two distinct subgroups on the basis of size and ecology. *Sphenomorphus aignanus* of eastern New Guinea, the D'Entrecasteaux Archipelago and the Louisiade Archipelago, and *S. louisiadensis* of the Louisiade Archipelago, are medium sized skinks which are probably surface dwelling forms judging from their size and limb proportions, whereas *S. minutus* of New Guinea and *S. bignelli* of the Solomon Islands are relatively small and are known to be cryptic inhabitants of the litter (Fred Parker, personal communication). These differences raise the possibility that these two subgroups lost the left oviduct independently of each other. All four species are oviparous.

Geomyersia glabra. This small, depressed skink is endemic to the northern Solomon Islands where it inhabits surface litter. The genus is monotypic and appears to have been derived from a small group of east Australian skinks (*Lampropholis* ; Greer and Parker, 1968*b* ; and Greer, 1974) all of which have paired oviducts. *Geomyersia glabra* is oviparous.

Lipinia leptosoma. This small arboreal species is endemic to the Palau Islands where to date it has only been found in the crowns of screw pine *Pandanus* (Brown and Fehlmann, 1958). The species' congeners are centered over the Philippines and New Guinea (Greer, 1974) and, as far as is known, all have paired oviducts. *L. leptosoma* is viviparous.

Sphenomorphus schultzei. This is a small New Guinea member of the *fasciatus* species group of *Sphenomorphus*—a group that has radiated extensively throughout northern Australia, New Guinea, the Bismarck Archipelago and the Solomon Islands (Greer and Parker, 1967 and 1974). *S. schultzei* inhabits dense rain forest in deep valleys where it lives under decaying logs and vegetable matter on the forest floor. As far as is known all other members of the species group have paired oviducts. *S. schultzei* is oviparous.