using chloroform–methanol (10:1) in the first direction and hexane–ethyl ether–acetic acid (80:20:1) in the second direction. The compounds were visualized with the Dittmer and Kaster reagents.

Albrecht et al. (170) used HPTLC with densitometry to study the effects of *Echinostoma caproni* (Trematoda) infection on the polar lipid content of the intestinal mucosa of experimentally infected ICR mice. The major phospholipids detected in both infected and noninfected mucosa were phosphatidylcholine (PC) and phosphatidylethanolamine (PE). There was a significant decrease in the weight of both PC and PE in the intestinal mucosa of infected mice compared to the uninfected controls. Cerebrosides and sulfatides, but not sphingomyelin, were identified in the intestinal mucosa of both infected and uninfected hosts. The pathobiochemical changes in the polar lipid content of infected hosts probably reflect feeding and behavioral activities of these intestinal parasites in the mouse intestine. Kulkarni et al. (171) used one-dimensional TLC to examine the glycolipid composition of some Indian linseed (*Linum unitatisum* in the family Liliaceae) varieties. The seeds were extracted in chloroform–methanol (2:1) to yield total lipids (42–46%). These were separated into neutral lipids (88–90%), glycolipids (6–7%), and phospholipids (4–6%) by silicic acid column chromatography. The glycolipids were separated by one-dimensional TLC into the following individual components: monogalactosyl-diacylglycerol (MGDG), digalactosyldiacylglycerol (DGDG), acylsterylgalactoside (ASG), and sterylgalactoside.

Young et al. (172) used HPTLC to determine lipids from the cloacal scent gland of the Eastern diamondback rattlesnake, *Crotalus adamentus*, and the Florida cottonmouth, *Agkistrodon piscivorus*. The secretions of both species contained free sterols, triacylglycerols, phosphatidylcholine, and phosphatidylethanolamine; methyl esters were present only in samples from *C. adamentus*, and there was no evidence of monacylglycerols, diacylglycerols, or alkylglycerols in either species. The possible role of cloacal scent gland lipids in defensive behavior was discussed. Yamashero et al. (173) used HPTLC to analyze lipids in 15 different species of cnidarians, most of which were species of coral from Okinawa, Japan. Neutral lipids consisted of free sterols, sterol esters, triacylglycerols, and monoalkyldiacylglycerols. The authors concluded that sterol composition may be useful in the biochemical classification of cnidarians. Nagyova and Tiffany (174) used TLC to show that polar lipids (mainly phosphatidylcholine and sphingomyelin) are important components responsible for the surface tension of human tears. Lee et al. (175) used HPTLC on silica gel to analyze neutral lipids in the ceca of mice and domestic chicks and in the ceca of chicks infected with a trematode of veterinary and wildlife significance, *Zygocotyle lunata*. The trematode altered the normal lipid pattern of the ceca, suggesting that it had a pathobiochemical effect on the host. The solvent system used was petroleum ether–diethyl ether–acetic acid (80:20:1), and lipids were detected by spraying the plates with 5% phosphomolybdic acid in ethanol and heating for 20 min at 110°C. Quantification was by densitometry at 700 nm.

Muller et al. (176) used HPTLC as described in Lee et al. (175) to examine the pathobiochemical effects of larval trematode parasitism on the marine snails *Ilyanassa obsoletus* and *Littorina littorea*. Parasitism altered the neutral lipid profiles of the snails. Muller et al. (177) used the procedures described in Lee et al. (175) to determine quantitatively by HPTLC various neutral lipids in the cercarial stages of two echinostome (flatworm) parasites. The function of lipids in larval trematodes was discussed.

Snail-conditioned water (SCW) provides a source of pheromones to attract larval trematodes to snails and for intra- and interspecific aggregation and mating responses of snails. Muller et al. (178) used HPTLC to examine the presence of various neutral lipids and phospholipids in snail-conditioned water from *Lymnaea elodes*. In addition to the usual chromatographic systems used [see Lee et al. (175)] the mobile phase of *n*-hexane–petroleum ether–diethyl ether–acetic acid, 50:20:5:1, was used to determine the presence of cholesteryl esters. The paper provided presumptive evidence of lipophilic pheromones released by the *L. elodes* snails.

Nikolova-Damyanova (179) reviewed quantitative TLC studies of triacylglycerols. She discussed the efficiency of silver ion and reversed-phase TLC in the analysis of triacylglycerols, including experimental conditions for the conversion of these techniques into full-scale quantitative analytical methods. The review has 43 references.

Marsit et al. (180) used HPTLC to determine neutral lipids in various larval stages of the paramphistomid trematode *Zygocotyle lunata*. They provided quantitative data on free sterols,